

# ***APPENDIX C***

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***WATER / WASTEWATER REPORT***



# Seminole Tribe of Florida Fee-to-Trust Project

## **WATER & WASTEWATER FEASIBILITY STUDY**

**MAY 2011**

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Prepared for:  
**Analytical Environmental Services**

Prepared by:  
**HydroScience Engineers, Inc.**

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STRATEGIC WATER SOLUTIONS





# **Seminole Tribe of Florida Fee-To-Trust Project Water and Wastewater Feasibility Study**

**May 2011**

Prepared for

Analytical Environmental Services  
Sacramento, CA

Submitted by

HydroScience Engineers, Inc.  
741 Allston Way  
Berkeley, CA 94710







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## APPENDICES

Appendix A:	City of Coconut Creek Utilities Agreement
Appendix B:	Broward County Guidelines for Determining Ability to Provide Potable Water and Sanitary Sewer Service
Appendix C:	City of Coconut Creek Water Quality Report

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## SECTION 1: INTRODUCTION

HydroScience Engineers (HSe) was retained by Analytical Environmental Services to complete a feasibility study evaluating the regulatory, technical, and engineering issues associated with supplying water and handling wastewater from the proposed Seminole Tribe of Florida Fee-to-Trust Project, which would be owned and operated by the Seminole Tribe of Florida (STOF). The objectives of this water and wastewater feasibility study are:

- To estimate the proposed Project's water supply and wastewater disposal requirements;
- To describe the facilities that would be required to supply the project with water and treat the wastewater generated;
- To develop a strategy for disposing of wastewater generated by the Project; and
- To identify applicable water and wastewater permitting issues for the proposed Project.

This report evaluates these objectives for three potential water and wastewater alternatives, as well as a no project alternative. The no project alternative is not discussed in this study because there would be no water or wastewater infrastructure changes. This document describes each alternative's water supply and wastewater requirements, identifies projected flows and demands, and identifies regulatory and permitting issues. Section 5 summarizes the facilities required to meet the water and wastewater requirements for the preferred alternative.

### 1.1 Proposed Project Sites

Three water and wastewater alternatives were identified for this project. Alternative A and Subalternative A-1 are similar in the type and size of expansion amenities, which would include a hotel, dining rooms, retail space, a spa, a lounge, a conference facility, and a showroom. The difference would be in the source of water and wastewater for the two alternatives: Alternative A would use water and wastewater services from the City of Coconut Creek (City); Subalternative A-1 would use on-site water and wastewater facilities developed and operated by the Tribe. **Figure 1-1** shows the location of the preferred project, Alternative A. **Figure 1-2** shows the location of the project site for Subalternative A-1.

Alternative B is similar to the previous alternatives in types of expansion amenities, but is much smaller in scale. Alternative B will have Tribal-operated on-site water and wastewater facilities similar to Subalternative A-1, however these facilities will be reduced in scale. **Figure 1-3** shows the location and footprint of the reduced project, Alternative B.

### 1.2 Report Organization

This report is divided into the sections described below.

- Section 1 – Introduction
- Section 2 – Alternative A - Preferred Project
- Section 3 – Subalternative A-1
- Section 4 – Alternative B
- Section 5 – Recommendations

- Section 6 – References

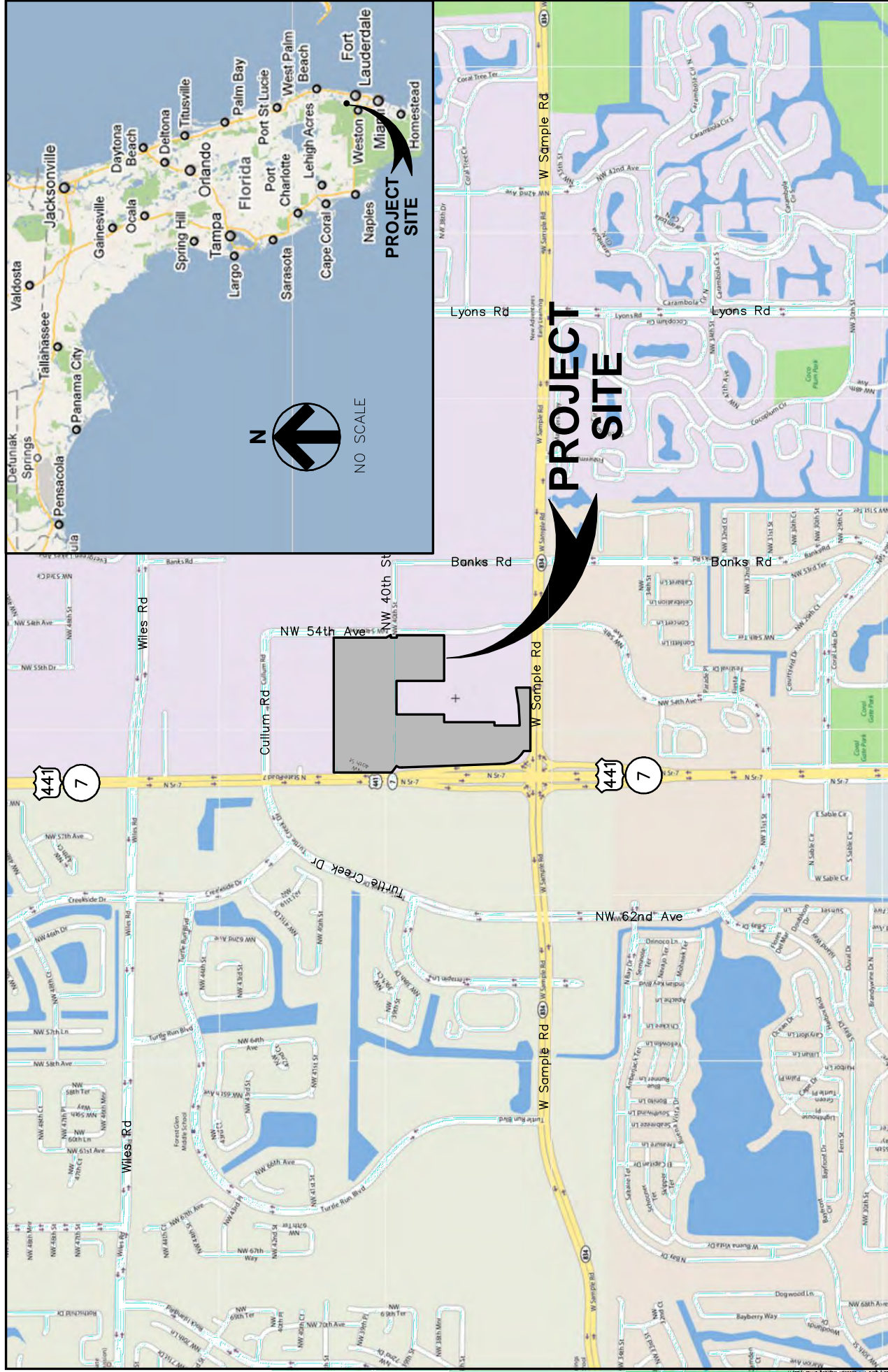


FIGURE 1-1  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
LOCATION MAP - ALTERNATIVE A





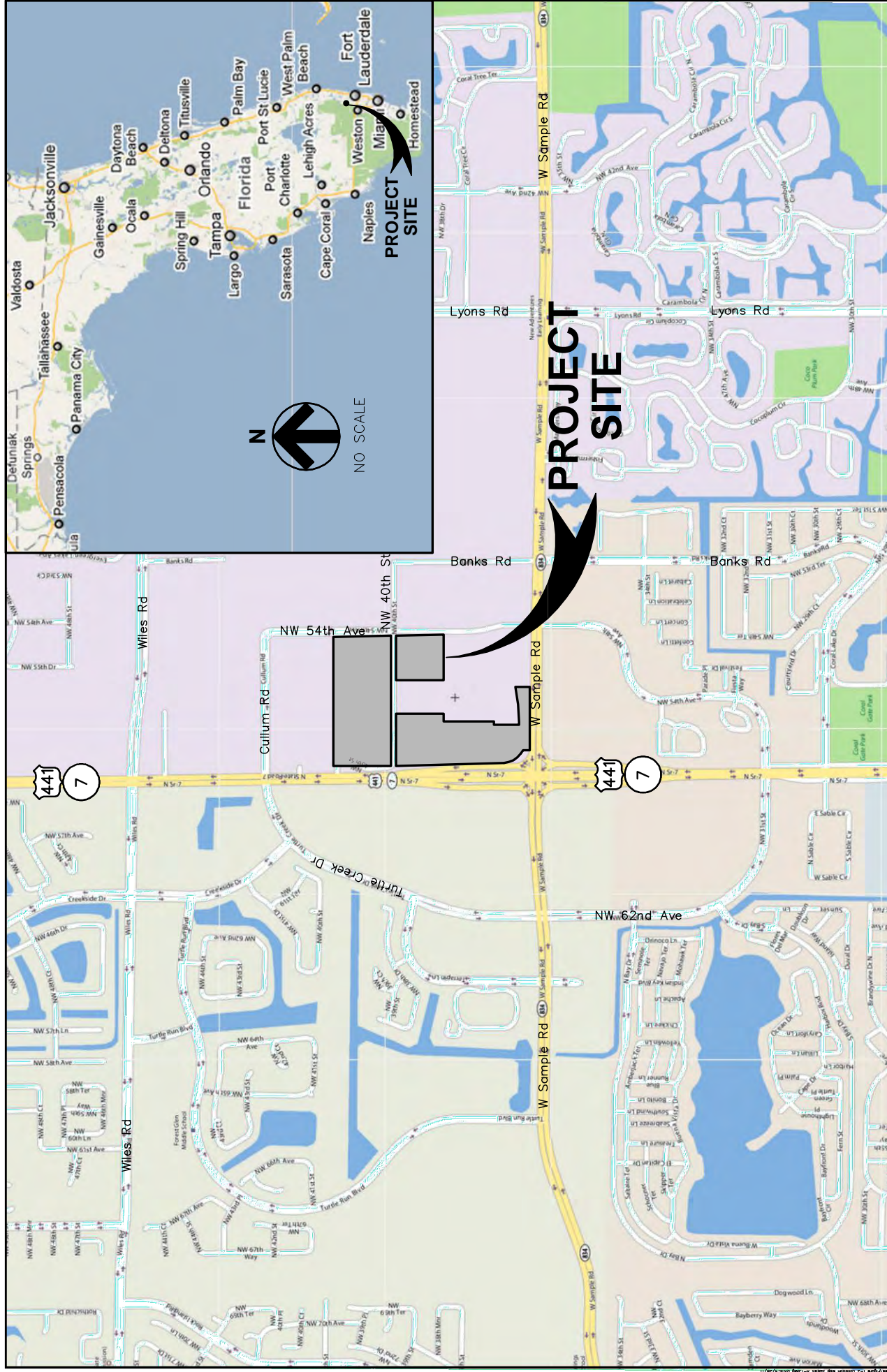


FIGURE 1-2  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
LOCATION MAP - SUBALTERNATIVE A-1





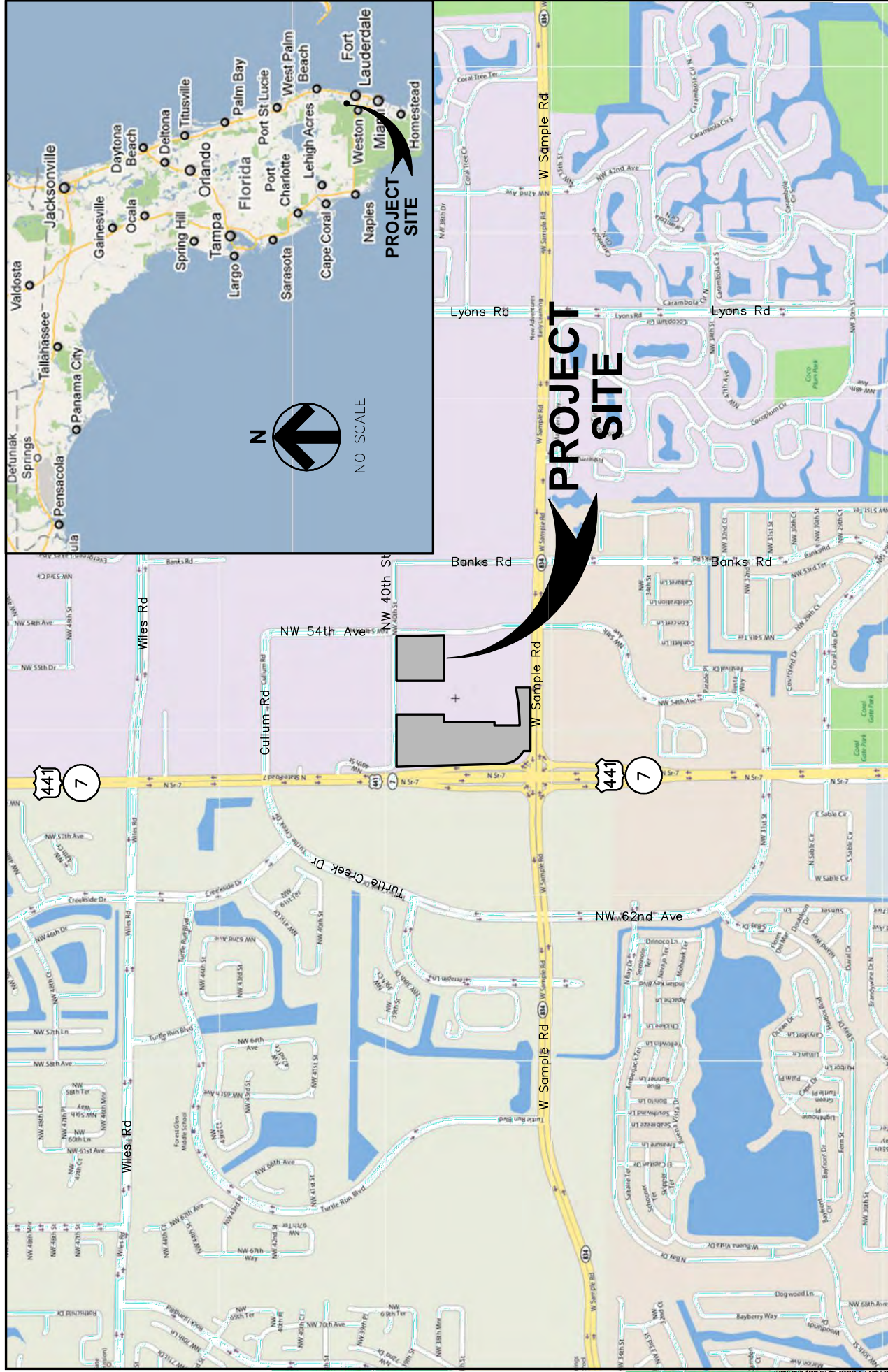


FIGURE 1-3  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
LOCATION MAP - ALTERNATIVE B



## SECTION 2: ALTERNATIVE A – PREFERRED PROJECT

The preferred project alternative is Alternative A. Alternative A would include a hotel, dining rooms, retail space, a spa, a lounge, a conference facility, and a showroom. A map showing a site plan for Alternative A is included as **Figure 2-1**.

### 2.1 Water and Wastewater Agreements with Coconut Creek

The STOF and the City of Coconut Creek entered into an agreement in January 2011 for the City to provide the Project with both potable water and wastewater service. Potable water would be used for irrigation purposes until recycled water can be made available by the city. This agreement establishes that the city of Coconut Creek has adequate capacity in their water and wastewater systems to service the proposed project. A full copy of this agreement is included as **Appendix A**.

The City of Coconut Creek purchases treated potable water from Broward County's District 2A Water Treatment Plant. The City owns the sewer collection system and conveys wastewater to the County's North Regional Wastewater Treatment Plant located in the City of Pompano Beach. As part of the agreement with the city of Coconut Creek, the STOF has agreed to use the Broward County guidelines for calculating the projected water demands and wastewater flows. A copy of these guidelines is included as **Appendix B**.

The existing on site facilities obtain water and wastewater services from the City of Coconut Creek under a previous agreement. This Project will have separate utilities for water and wastewater under the January 2011 agreement and will not tie into the on-site utilities for the existing facilities.

### 2.2 Water Demands

As described in *Section 2.1, Water and Wastewater Agreements with Coconut Creek*, the STOF and the City of Coconut Creek agreed to have the City of Coconut Creek provide water service to the Project. Water demands calculated for Alternative A are based on the standard water use factors developed by Broward County. The Broward County standard water use factors presented in **Appendix B** states that Broward County reserves the right to perform an engineering analysis when it deems the analysis necessary. This study could be used as data for a subsequent analysis, should it be required.

Preliminary projections of the water supply needed to reliably meet water demand for Alternative A are summarized in **Table 2-1**. These projections are based on the profile of Alternative A identified in the EIS. These numbers are preliminary and are for planning purposes only.

**Table 2-1: Projected Water Demands for Alternative A**

Project Component	Quantity	Units	Unit Flow	Average Day Flow (gpd)
Hotel	1,000	rooms	243 gpd/room	243,000
Hotel Lobby	10,400	sf	-	-
Dining / Restaurants	59,200	sf	699 gpd/1,000 sf	41,000
Retail	44,100	sf	346 gpd/1,000 sf	15,000
Back-of-House	61,400	sf	178 gpd/1,000 sf	11,000
Circulation	23,000	sf	-	-
Spa	19,800	sf	154 gpd/1,000 sf	3,000
Club / Lounge	11,600	sf	346 gpd/1,000 sf	4,000
Conference Facility	76,200	sf	172 gpd/1,000 sf	13,000
Showroom Facility	31,300	sf	172 gpd/1,000 sf	5,000
Restrooms <sup>3</sup>	7,400	sf	-	-
Outdoor Terrace	11,000	sf	346 gpd/1,000 sf	4,000
Valet	2,000	sf	-	-
Vestibule	2,700			
Parking Structure (7 levels)	5,000	sf	-	-
Water/Wastewater Treatment Plant	-	sf	103 gpd/1,000 sf	-
Fire / Police Station	-	sf	178 gpd/1,000 sf	-
<b>Average Day Demand</b>				<b>339,000</b>
<b>Average Day Demand with 15% contingency</b>				<b>390,000</b>
<b>Maximum Day Demand<sup>1</sup></b>				<b>534,000</b>
<b>Peak Hour Demand<sup>2</sup></b>				<b>885,000</b>

Notes:

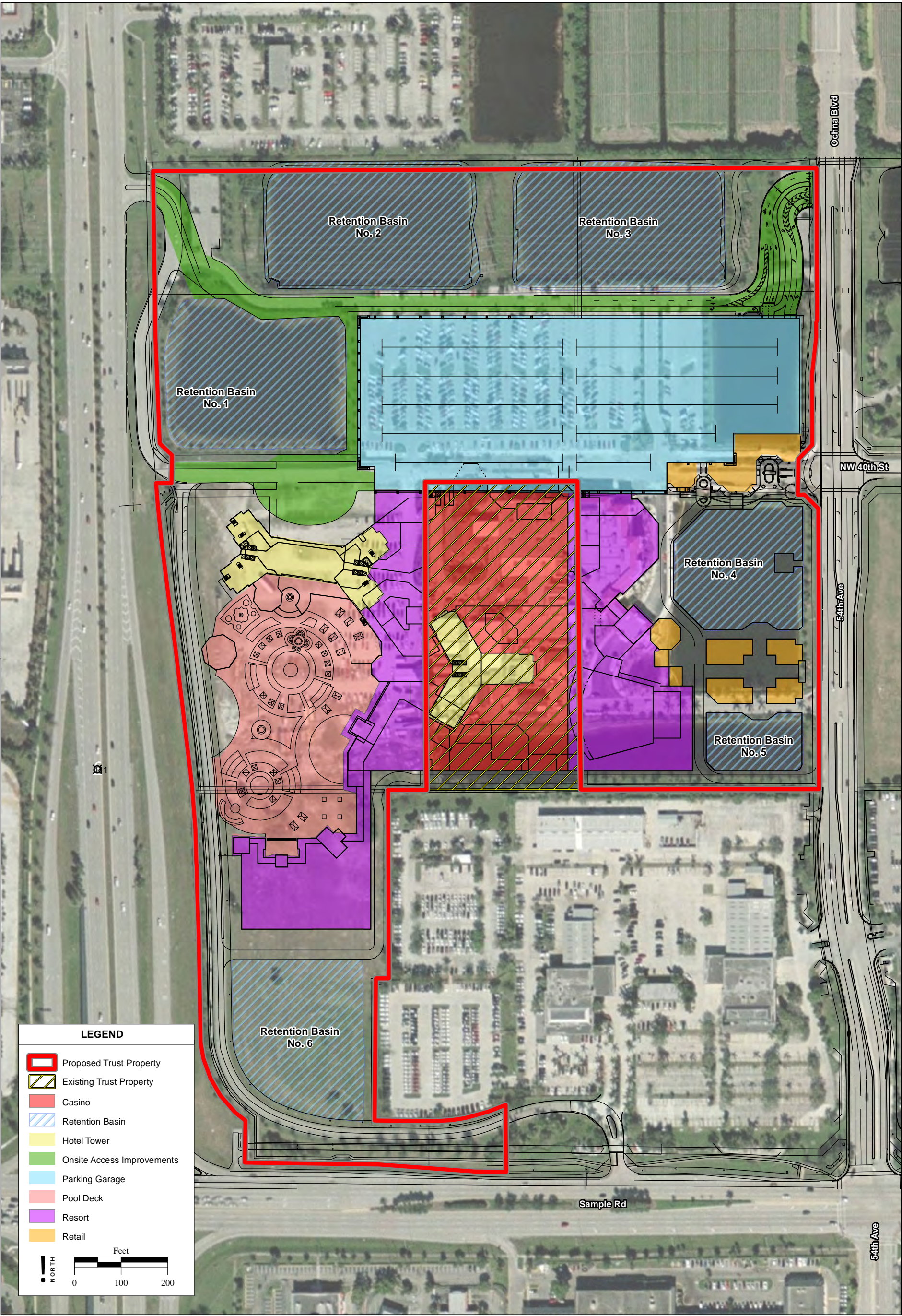
1. Maximum Day factor 1.37
2. Peak Hour factor 2.27 (Broward County Guidelines, **Appendix B**).
3. Water demands associated with the restrooms are accounted for in the demand calculation for the project component immediately adjacent to each restroom.
4. gpd = gallons per day

## 2.3 Water Supply

The City of Coconut Creek has existing potable water lines that extend around all sides of the project except the east side of the southwest corner, where a retention basin is planned. **Figure 2-2** shows the proposed potable water points of connection (POC) locations and the size of the existing infrastructure at the tie-in points. There are seven proposed POCs shown for the Project, three on the north (POCs #1, #6, and #7), two on the west (POCs #4 and #5), one from the south (POC #3) and one from the east (POC #2).

These potable water points of connection were placed based on the proposed project plans, and the existing city infrastructure. A minimum of two points of connection were located on each section of the proposed expansion in order to facilitate the construction of a looped potable





SOURCE: Friedmutter Group, 6/2010; Aerial Express aerial photograph, 4/2008; AES, 2011







LINE SIZE AT POINTS OF CONNECTIONS									
1	8" P.V.C. SS	4	8" P.V.C. SS	7	8" D.I.P. W	10	8" D.I.P. W	13	8" D.I.P. W
2	8" D.I.P. W	5	8" D.I.P. W	8	8" P.V.C. SS	11	8" P.V.C. SS		
3	12" D.I.P. W	6	8" P.V.C. SS	9	8" P.V.C. SS	12	8" D.I.P. W		

**FIGURE 2-2**  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
**ALTERNATIVE A - WATER AND WASTEWATER SERVICE CONNECTIONS**





water distribution system for added reliability and redundancy. The POCs shown are preliminary and are for planning purposes only, actual size of connections and locations will be determined during the design phase. Fire flow POCs would be separate POCs from the domestic water service and are assumed to be located near the domestic water distribution POCs.

The Project was included in the City of Coconut Creek's future planning for water allocations from Broward County. If for any reason, the City of Coconut Creek did not provide water to the Project, then the City would have to state this in writing, releasing the Project to contract water purveyors outside of the Coconut Creek service area. In the event that this should happen, it is believed that there would be capacity for the project to be served with water from one or multiple purveyors outside of Coconut Creek, including the City of Margate and the City of Coral Springs. Both of these cities have water treatment and distribution systems in close proximity to the project site (Margate, 2009 and Coral Springs 2009). Their water and wastewater service areas are identified in **Figure 2-3**.

## **2.4 Wastewater**

As described in *Section 2.1, Water and Wastewater Agreements with Coconut Creek*, the agreement signed in January 2011 for the expansion facilities with the City addresses both water and wastewater services. *Section 2.1* further explains that the existing facilities operate under a previous agreement to send wastewater to the City collection system. This Project will have separate wastewater utilities and will not tie into the existing wastewater pipelines on-site.

The existing City of Coconut Creek sanitary sewer lines extend around all sides of the project except the east side of the southwest corner. There are six proposed POCs for Alternative A, two on the north (POCs #1 and #6), two on the west (POCs #4 and #5), one from the south (POC #3), and one from the east (POC #2). While there are existing laterals in the southwest corner, they will not be used for Alternative A because a retention basin is planned for the southwest corner. These wastewater points of connection were placed based on the proposed project plans, and the existing city infrastructure. **Figure 2-2** shows the potential wastewater POC locations and the size of the existing infrastructure at the tie-in points. The POCs shown are preliminary and are for planning purposes only, actual size of connections and locations will be determined during the design phase.

If for any reason, the City of Coconut Creek did not provide wastewater to the Project, then the City would have to state this in writing, releasing the Project to contract outside of the Coconut Creek service area. In the event that this should happen, it is believed that there is capacity for the project to receive wastewater service from one or multiple purveyors outside of Coconut Creek. The City of Margate and the City of Coral Springs are located south and west of the Project site, respectively. They each have wastewater collection and treatment systems (Margate, 2009 and Coral Springs 2009). The water and wastewater service areas are identified in **Figure 2-3**.

## 2.4.1 Wastewater Capacity

As described in *Section 2.1, Water and Wastewater Agreements with Coconut Creek*, the STOF and the City of Coconut Creek agreed to use Broward County rates to calculate the wastewater demands for the project. The Broward County Water Supply document in **Appendix B** states that it reserves the right to perform an engineering analysis when it deems the analysis necessary. This study could be used as data for a subsequent analysis, should it be required.

**Table 2-2** summarizes the projections of wastewater volumes generated by Alternative A. These projections are based on the profile of Alternative A identified in the EIS. These numbers are preliminary and are for planning purposes only.

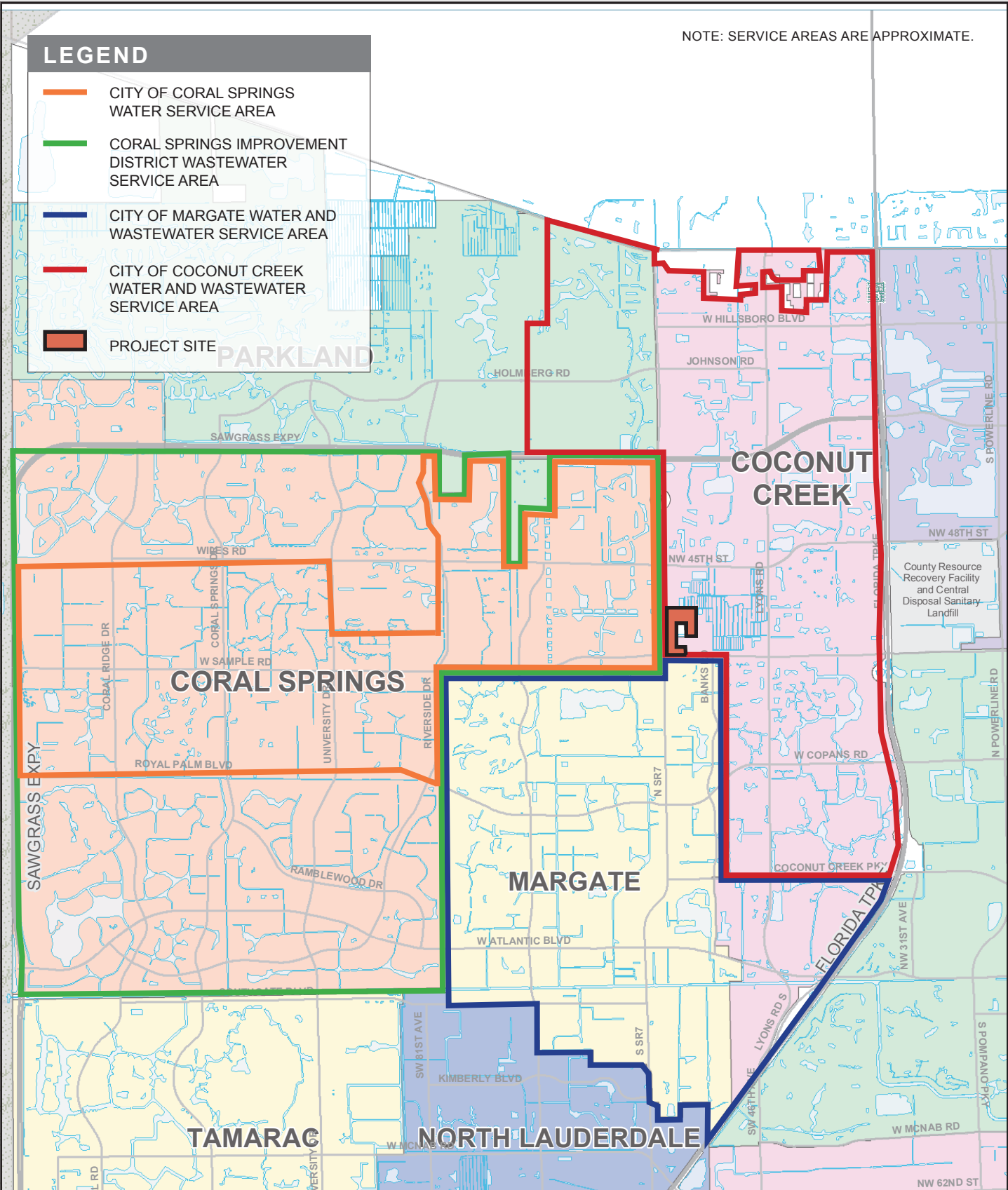
**Table 2-2: Projected Wastewater Flows for Alternative A**

Project Component	Quantity	Units	Unit Flow	Average Day Flow (gpd)
Hotel	1,000	rooms	217 gpd/room	217,000
Hotel Lobby	10,400	sf	-	-
Dining / Restaurants	59,200	sf	624 gpd/sf	37,000
Retail	44,100	sf	138 gpd/sf	6,000
Back-of-House	61,400	sf	159 gpd/sf	10,000
Circulation	23,000	sf	-	-
Spa	19,800	sf	138 gpd/sf	3,000
Club / Lounge	11,600	sf	309 gpd/sf	4,000
Conference Facility	76,200	sf	153 gpd/sf	12,000
Showroom Facility	31,300	sf	153 gpd/sf	5,000
Restrooms <sup>2</sup>	7,400	sf	-	-
Outdoor Terrace	11,000	sf	309 gpd/sf	3,000
Valet	2,000	sf	-	-
Vestibule	2,700	sf	-	-
Parking Structure (7 levels)	5,000	spaces	-	-
Water Treatment Plant	-	sf	92 gpd/sf	-
Fire / Police Station	-	sf	159 gpd/sf	-
<b>Total Wastewater Generated, Average Day Flow</b>				<b>297,000</b>
<b>Total Wastewater Generated, Average Day Flow with 15% Contingency</b>				<b>342,000</b>
<b>Total Wastewater Generated, Peak Day Flow<sup>1</sup></b>				<b>1,197,000</b>

Notes:

1. Peak factor 3.50 (Broward County Guidelines, **Appendix B**).
2. Wastewater flows associated with the restrooms are accounted for in the project component immediately adjacent to each restroom.
3. gpd = gallons per day
4. gpm = gallons per minute
5. All flow values were rounded to the nearest 1,000 gpd.

NOTE: SERVICE AREAS ARE APPROXIMATE.



Map Source: Broward County, Municipal Boundaries 2010. <<http://gis.broward.org/maps/webPDFs/Cities/bcmuni24x24.pdf>> April 2011.



**FIGURE 2-3**  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
WATER AND WASTEWATER SERVICE AREAS



## 2.5 Reclaimed Water

For purposes of this analysis, reclaimed water is not available at this time. However, Coconut Creek is planning to extend the reclaimed water distribution network from the 10 million gallon per day (MGD) reclaimed water treatment facility, which is part of the North Regional Wastewater Treatment Plant (Coconut Creek, 2011). The Project is associated with and located within the Planned MainStreet Development District, which will extend reclaimed water lines to the area (Coconut Creek, 2008). Once these reclaimed utilities are constructed, potential POCs for this project will be determined.

Potable water lines used for irrigation could be converted to connect to reclaimed water lines, when they become available. The cooling towers could also be connected to City's planned reclaimed water lines. If reclaimed water is to be used in the future for toilet flushing, then it is recommended that dual plumbing be installed when the Project is constructed. The use of reclaimed water can significantly reduce the potable water demanded by the project.

## 2.6 Alternative A Summary

The STOF and the City of Coconut Creek entered into an agreement in January 2011 for the City to provide the Project with both water and wastewater service. The preferred alternative for the Project is to connect to the City of Coconut Creek's water and wastewater services under this agreement.

In the future, there may be an opportunity to connect to the City's reclaimed water lines, and use reclaimed water for irrigation, cooling towers, and toilet flushing. The Project's landscape irrigation potable water lines could be converted to connect to reclaimed water lines, when they become available. The cooling towers could also be connected to City's planned reclaimed water lines. If reclaimed water is to be used in the future for toilet flushing, then it is recommended that dual plumbing be installed when the Project is constructed.

**Table 2-3: Alternative A Key Planning Considerations**

Parameter	Value
<b>Potable Water Connection</b>	
City of Coconut Creek	7 POCs
<b>Water Demand</b>	
Maximum Water Demand	534,000 gpd
Peak Hour Demand	885,000 gpd
<b>Wastewater Connection</b>	
City of Coconut Creek	6 POCs
<b>Wastewater Flows</b>	
Average Day with 15% Contingency	0.342 MGD
Peak Day	1.197 MGD



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## SECTION 3: SUBALTERNATIVE A-1

This section presents the requirements for on-site water and wastewater treatment associated with Subalternative A-1. Subalternative A-1 has a very similar program to Alternative A including a hotel, dining rooms, retail space, a spa, a lounge, a conference facility, and a showroom. However, Subalternative A-1 involves the STOF providing water and treating wastewater on-site. A map showing a site plan for Subalternative A-1 is included as **Figure 3-1**. Because the Project would be located on federally owned trust land, the EPA has jurisdiction over on-site water and wastewater services. The STOF is not subject to state requirements except by agreement.

### 3.1 Water Demands

Preliminary projections of the water supply needed to reliably meet water demand for Subalternative A-1 are summarized in **Table 3-1**.

**Table 3-1: Projected Water Demands for Subalternative A-1**

Project Component	Quantity	Units	Unit Flow	Average Day Flow (gpd)
Hotel	1,000	rooms	243 gpd/room	243,000
Hotel Lobby	10,400	sf	-	-
Dining / Restaurants	51,500	sf	699 gpd/1,000 sf	36,000
Retail	28,500	sf	346 gpd/1,000 sf	10,000
Back-of-House	116,500	sf	178 gpd/1,000 sf	21,000
Circulation	20,400	sf	-	-
Spa	19,800	sf	154 gpd/1,000 sf	3,000
Club / Lounge	25,800	sf	346 gpd/1,000 sf	9,000
Conference Facility	76,200	sf	172 gpd/1,000 sf	13,000
Showroom Facility	31,300	sf	172 gpd/1,000 sf	5,000
Restrooms <sup>3</sup>	7,400	sf	-	-
Outdoor Terrace	11,000	sf	346 gpd/1,000 sf	4,000
Valet	2,000	sf	-	-
Vestibule	2,700	sf	-	-
Parking Structure (7 levels)	4,500	sf	-	-
Water/Wastewater Treatment Plant	18,700	sf	103 gpd/1,000 sf	2,000
Fire / Police Station	20,000	sf	178 gpd/1,000 sf	4,000
<b>Average Day Demand</b>				<b>350,000</b>
<b>Average Day Demand with 15% Contingency</b>				<b>403,000</b>
<b>Maximum Day Demand<sup>1</sup></b>				<b>552,000</b>
<b>Peak Hour Demand<sup>2</sup></b>				<b>915,000</b>

Notes:

1. Maximum day factor 1.37
2. Peak hour factor 2.27 (Broward County Guidelines, **Appendix B**).
3. Water demands associated with the restrooms are accounted for in the demand calculation for the project component immediately adjacent to each restroom.
4. gpd = gallons per day

These projections are based on the Broward County flow rates. These numbers are preliminary and are for planning purposes only.

### **3.2 Water Supply**

For Subalternative A-1, the water supply for the project will be provided by two on-site groundwater wells. Based on the performance of other local groundwater wells, it is believed that one well would be capable of providing the necessary capacity for the project; however, two would be drilled for reliability and redundancy.

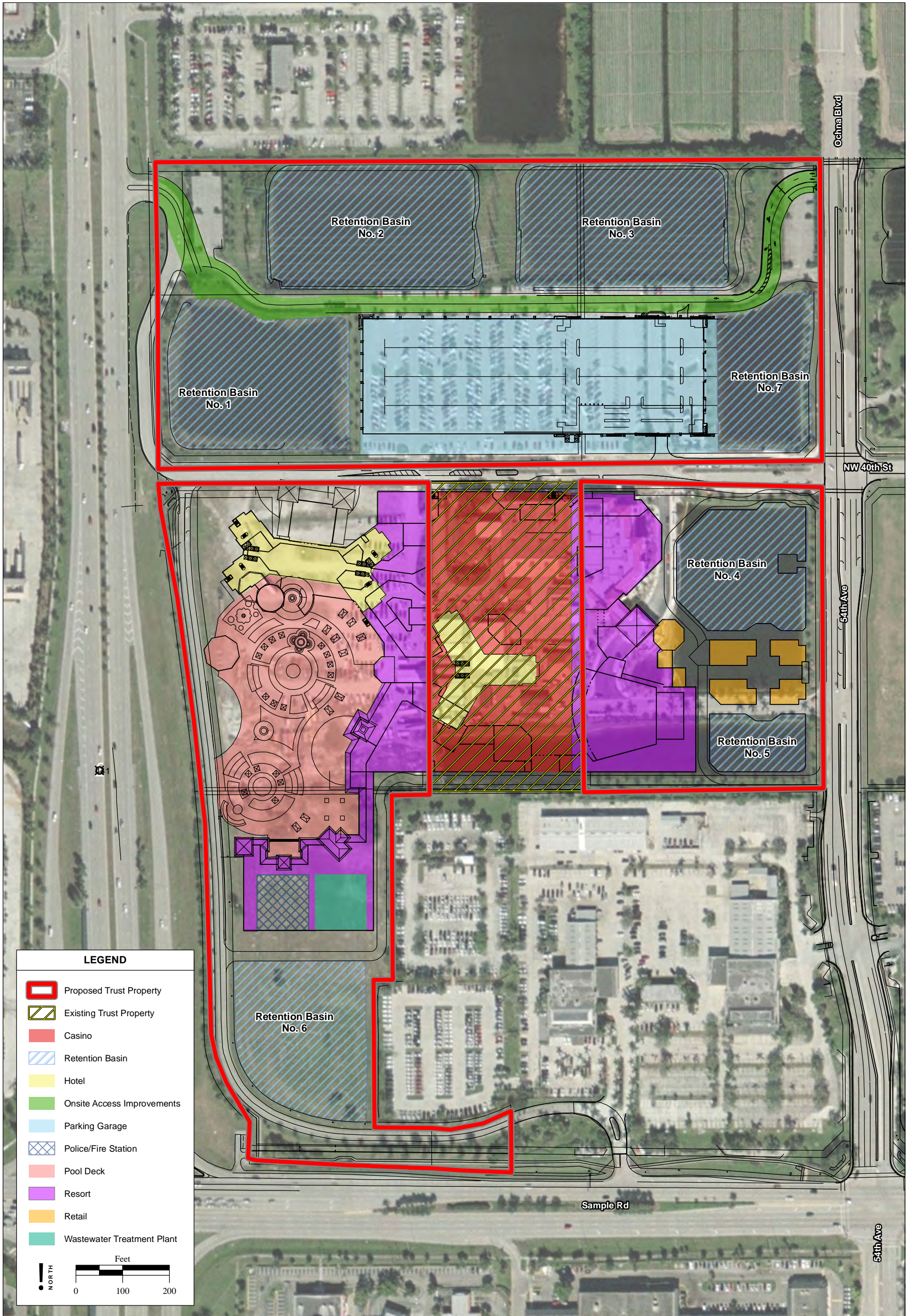
There is one existing on-site well that is not currently used. It is thought to have been used for agricultural purposes. No additional information about this on-site well was immediately available. Additionally, it is recognized that the project will need to use these groundwater resources in a manner that will not cause saltwater intrusion or overdraft of the aquifer, as agreed to in the MainStreet Design Standards (Coconut Creek, 2008). It is expected that groundwater is available below the Project site in the Biscayne aquifer.

The main source of fresh water for South Florida is groundwater. South Florida receives about 55 to 60 inches of rainfall a year, but about 45 inches are lost to evaporation and transpiration. Droughts reduce the amount of rainfall that soaks through the soil to replenish the aquifer. The South Florida Water Management District has drafted the Water Shortage Plan to deal with water shortages. The plan is designed to protect water resources from harm such as saltwater contamination and to ensure a fair distribution of available supplies. Restrictions affect all users, including businesses, industries, agriculture, residents, and tourists. Restrictions apply to private wells, lakes, canals, and water utilities. Water conservation is encouraged as part of drought preparedness (SFWMD, 2011).

The Environmental Protection Agency has designated the Biscayne aquifer as a sole-source aquifer, meaning that this aquifer is the only viable groundwater source in the entire area of the Project and Broward County. Shallow aquifers, including the Biscayne aquifer and other localized aquifers that are part of the surficial aquifer system, yield practically all of the municipal and much of the irrigation water used in south Florida. The Biscayne aquifer is approximately 50 to 200 ft below ground surface in the vicinity of the Project. The upper 3,000 ft of rock underlying south Florida is composed chiefly of limestone, dolomite, sand, clay, and shells. The Biscayne aquifer consists of highly permeable Pleistocene limestone and sand, overlain in some areas by a thin layer of peat and sand. Below the Biscayne aquifer, a confining unit of low-permeability, largely clayey deposits, about 1,000 ft thick separates the Biscayne aquifer from the brackish-water Floridan aquifer. The Biscayne aquifer is recharged from rainfall and from water that leaks downward from the canals (Fish and Stewart, 1991; Merritt, 1996).

Florida Department of Environmental Protection (FDEP) characterizes the environmental conditions of Florida's freshwater resources through several monitoring programs. The information below is from the report on the 2007 Status Monitoring Network results for the Biscayne Bay-Southeast Coast Basin (FDEP, 2011b). FDEP's Watershed Monitoring Section samples ground water in the Biscayne Bay-Southeast Coast Basin through wells in unconfined aquifers. Approximately 29% of the 590 wells in unconfined aquifers were accessible for this 2007 monitoring study. FDEP has identified a number of important indicators for groundwater quality.





SOURCE: Friedmutter Group, 6/2010; Aerial Express aerial photograph, 4/2008; AES, 2011





Exceedances of lead (5%) and sodium (8%) are found in a small percentage of the unconfined wells. Total coliform bacteria exceed the standard in 36% of the unconfined wells. These bacteria are indicators of possible human health effects if the water is used for drinking. All other analytes are within standards. **Table 3-2** summarizes the groundwater quality thresholds for the indicators.









**Table 3-2: Groundwater Quality**

Indicators	Criterion/Threshold <sup>1</sup>
Arsenic	≤ 10 µg/L
Cadmium	≤ 5 µg/L
Chromium	≤ 100 µg/L
Lead	≤ 15 µg/L
Nitrate-Nitrite	≤ 10 mg/L
Sodium	≤ 160 mg/L
Fluoride	≤ 4 mg/L
Total Coliform Bacteria (counts per 100 milliliters)	≤ 4 (sample maximum)

Source: FDEP, 2011b

Notes:

1. µg/L – micrograms per liter
2. mg/L – milligrams per liter

Ground Water Resource	Arsenic	Cadmium	Chromium	Lead	Nitrate-Nitrite	Sodium	Fluoride	Total Coliform
Unconfined Wells								
Confined Wells	na	na	na	na	na	na	na	na

Source: FDEP, 2011b

Note:

1. The lighter areas of each pie chart represent the percentage of water resources that meet water quality standards. Darker areas represent the percentages that don't meet the standards.

The City of Coconut Creek's water quality is summarized in a Consumer Confidence Report also included as **Appendix C**.

### 3.2.1 Water Facility Requirements

This section identifies preliminary water supply, water treatment, water storage, and pumping requirements to supply Subalternative A-1 with water. The facilities identified in this section are based on HSe's experience with similar projects. The general concept for the water supply facility is that the Project will maximize the use of reclaimed water in order to minimize the water supply requirements for the Project and thus minimize the impact on the Biscayne aquifer. The overall water facilities will be located based on the final design of the Project facilities. All of the

recommended water supply facilities described in this study are preliminary, and should be used for planning purposes only.

The projected water demand for Subalternative A-1 is the maximum day demand summarized in **Table 3-1**. Since water is lost during treatment, water supply requirements for raw water prior to treatment must account for these losses. Treatment losses are expected to be approximately 15%, so the minimum firm recommended water supply below is 15% greater than the demand. The on-site facilities are shown in **Figure 3-2**. The anticipated well capacity, location, treatment and operating strategy would be developed further during the design phase.

**Table 3-3: Projected Water Supply Requirements for Subalternative A-1**

Water Demand without Reclaimed Water (gpd) <sup>1,2</sup>	Water Demand with Reclaimed Water (gpd) <sup>3</sup>	Minimum Recommended Firm Water Supply (gpd) <sup>4</sup>
552,000	452,000	635,000

Notes:

1. gpd = gallons per day.
2. Maximum day demand from Table 3-1.
3. Reclaimed water demand of 100,000 gpd subtracted from 552,000 gpd.
4. Water demand without reclaimed water increased 15% to account for losses during water treatment.

It is anticipated that two new wells will be required to supply water for Subalternative A-1. The potable water supply system must have a firm reliable supply based on projected water demands. By definition, firm capacity is the remaining water supply capacity with the largest single source out of service. In a well system, it is generally recommended to have a minimum of two wells available for service, so one can be serviced without interrupting the water supply. The actual well capacity, location, treatment, and operating strategy will be further developed during the design phase.

A key design requirement that must be addressed during the construction of the wells is the need to minimize impacts to neighboring domestic wells. A test hole should be drilled to a minimum depth of approximately 100 feet, and screen sections should be placed in the water bearing zone of the Biscayne aquifer. The water bearing zone of the Biscayne aquifer where it underlies Broward County is approximately 100 to 200 feet below ground surface. Yield and drawdown tests would then be conducted to determine the impacts on the aquifer and surrounding domestic wells.

**Table 3-4** shows the recommended design criteria for an on-site well. The well is expected to have an approximate footprint of 20 feet by 20 feet, including the pump, well, piping, and miscellaneous equipment. Although the STOF is not bound by state regulations, the EPA typically follows state guidelines. As required by Chapter 62-532 of the Florida Administrative Code (F.A.C), the well's casing shall extend from the upper terminus of the well to the well screen and the well screen shall be attached to the casing with a watertight seal.









**Table 3-4: Recommended Water Production Well Design Criteria**

Parameter	Value
Approximate depth	100 to 200 ft
Casing diameter	12-inch to 21-inch
Surface seal depth	Top of screen
Casing material	Copper bearing steel
Screen material	Wire-wrapped stainless steel
Approximate screen depth range	Between 100 ft and 200 ft
Pump type	Vertical turbine multistage
Method of control	On/off by tank level

Based on the water quality presented in *Section 3.2 Water Supply*, an on-site water treatment plant would be required to treat the groundwater from the on-site wells. The Biscayne aquifer provides hard water, so while the water is of high quality, water samples would need to be taken and analyzed in order to determine the exact treatment required. Typically, to treat the water, it is aerated and lime is added to soften it. A coagulant is added to settle out the solids. Chlorine is added to oxidize and remove iron. The pH is adjusted using sulfuric acid. Soda ash provides second stage softening to remove non-carbonate hardness. Fluoride is added and the water is disinfected with ammonia (chloramine disinfection) or chlorine before being stored on-site in the potable water storage tank (FDEP, 2011). A preliminary water and wastewater treatment plant layout is shown in **Figure 3-3**. The recommended Water Treatment Plant design criteria are summarized in **Table 3-5** though it should be noted that these criteria would be developed further during the design phase. A preliminary process flow diagram for water treatment is shown in **Figure 3-4**.

**Table 3-5: Recommended Water Treatment Plant Design Criteria**

Parameter	Value
Process	Pressure filtration
Media	Anthracite/greensand
Number of filters	1
Filter loading rate	3 gpm/square foot (sf)
Oxidant	Sodium Hypochlorite or Ammonia
Process control	PLC/on with service well

sf = square foot

A water storage tank would be constructed to store water produced by the water treatment plant. Storage requirements are generally controlled by fire protection requirements, and not by domestic peaking requirements. Storage requirements were determined based on the Broward County guidelines. The anticipated potable water tank capacity is approximately 1.7 MG, and would be of welded steel construction meeting all American Water Works Association (AWWA) specifications for welded steel tanks.

Since the site is largely flat, with no land at an elevation suitable to gravity feed the distribution system, it is recommended that a pump station be used to maintain pressure in the distribution system. This potable water pump station would be sized to handle both fire flow and domestic demands. The ultimate pumping capacity will be dependent on fire flow requirements, and would be satisfied by two duty and one stand-by fixed-speed high-service pumps that are half the capacity of the projected flow requirement. **Table 3-6** shows the design criteria for the water storage tank and pump station.

**Table 3-6: Recommended Water Storage Tank and Pump Station Design Criteria**

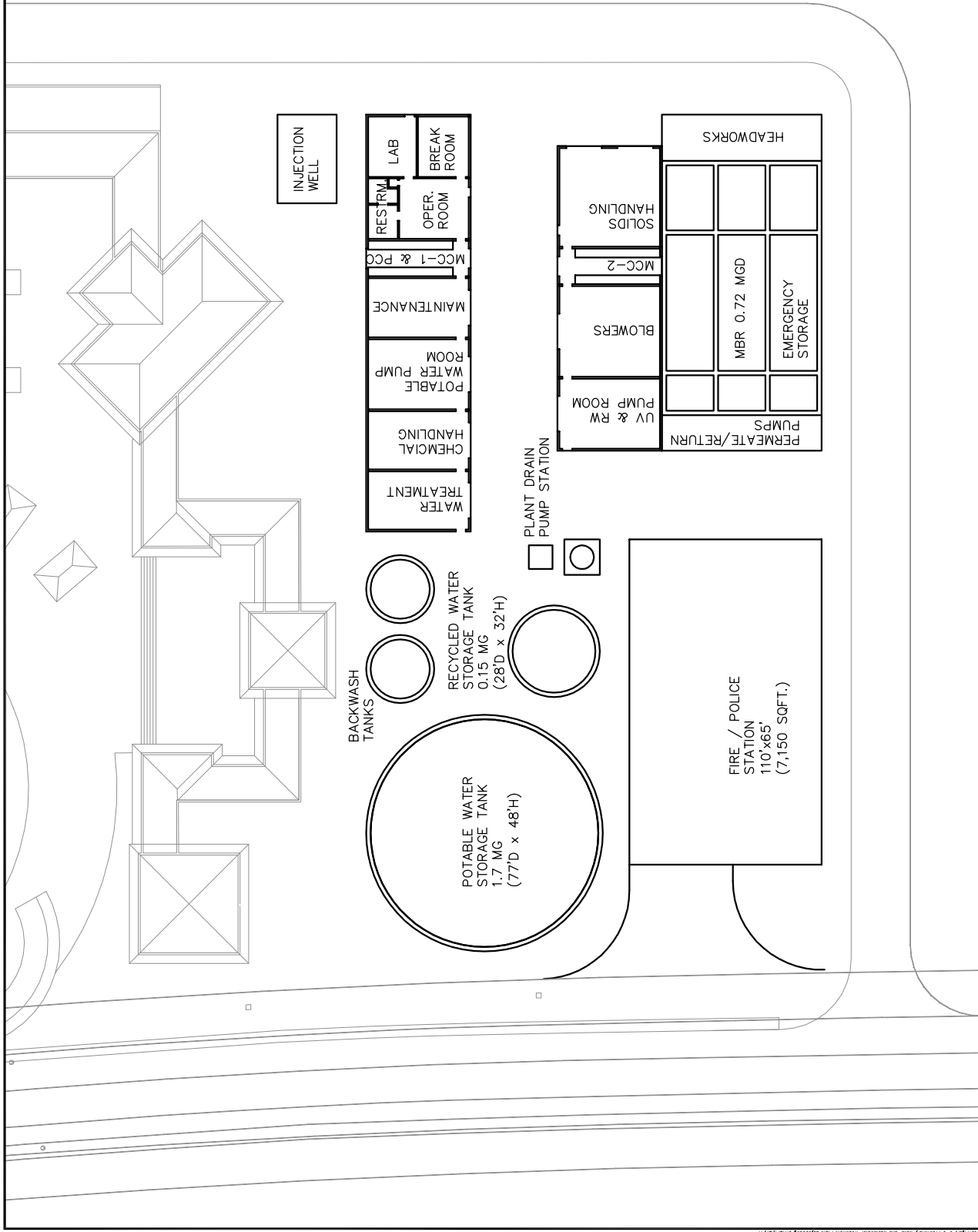
Parameter	Value
<b>Water Storage Tank</b>	
Approximate size	1.7 MG
Approximate diameter	77 feet
Approximate height	48 feet
Construction	Welded steel
<b>Potable Water Pump Station</b>	
Low service pump number	3 (2 duty, 1 stand-by)
Low service pump type	Variable speed turbine
High service pump number	2
Hydro pneumatic tank approximate size	2,000 gallons

Notes:

1. MG = million gallons

### 3.3 Wastewater

Average weekday and peak weekend flows for Subalternative A-1 were based on Broward County flow rates (**Appendix B**). **Table 3-7** summarizes the projections of wastewater volumes generated by Subalternative A-1. These projections are based on the profile of Subalternative A-1 identified in the EIS.



**FIGURE 3-3**  
**SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT**  
**WATER AND WASTEWATER FEASIBILITY STUDY**  
**PRELIMINARY WATER AND WASTEWATER TREATMENT PLANT LAYOUT**



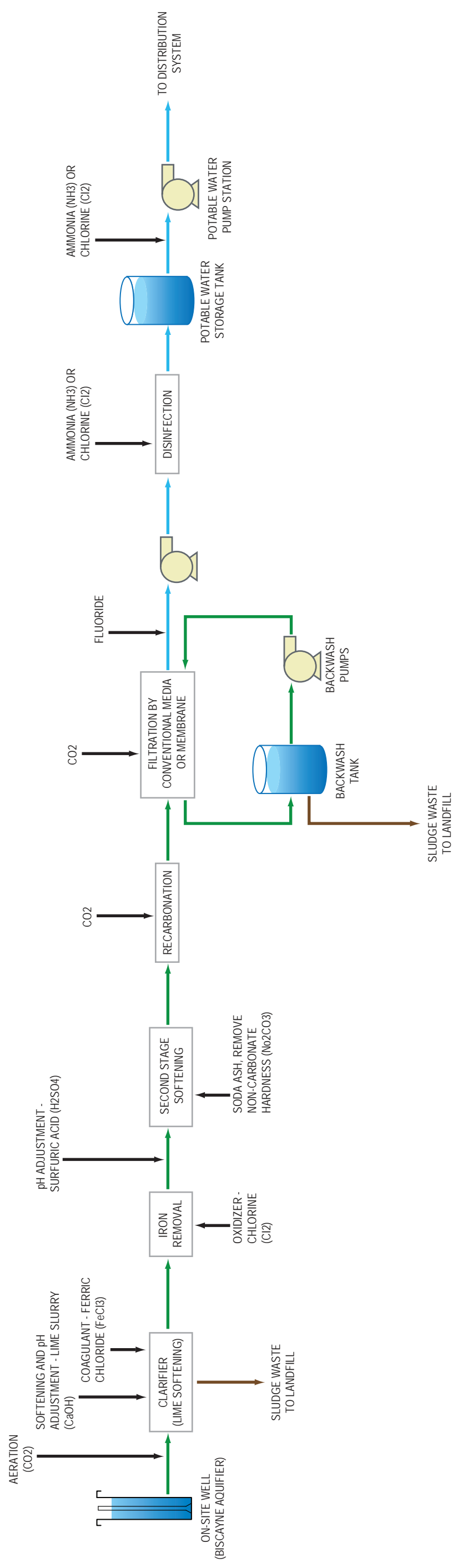


FIGURE 3-4  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
PRELIMINARY WATER TREATMENT PROCESS FLOW DIAGRAM



**Table 3-7: Projected Wastewater Flows for Subalternative A-1**

Project Component	Quantity	Units	Unit Flow	Average Day Flow (gpd)
Hotel	1,000	rooms	217 gpd/room	217,000
Hotel Lobby	10,400	sf	-	-
Dining / Restaurants	51,500	sf	624 gpd/sf	32,000
Retail	28,500	sf	138 gpd/sf	4,000
Back-of-House	118,500	sf	159 gpd/sf	19,000
Circulation	20,400	sf	-	-
Spa	19,800	sf	138 gpd/sf	3,000
Club / Lounge	25,800	sf	309 gpd/sf	8,000
Conference Facility	76,200	sf	153 gpd/sf	12,000
Showroom Facility	31,300	sf	153 gpd/sf	5,000
Restrooms <sup>2</sup>	7,400	sf	-	-
Outdoor Terrace	11,000	sf	309 gpd/sf	3,000
Valet	2,000	sf	-	-
Vestibule	2,700	sf	-	-
Parking Structure (7 levels)	4,500	spaces	-	-
Water Treatment Plant	18,700	sf	92 gpd/sf	2,000
Fire / Police Station	20,000	sf	159 gpd/sf	3,000
<b>Total Wastewater Generated, Average Day Flow</b>				<b>308,000</b>
<b>Total Wastewater Generated, Average Day Flow with 15% Contingency</b>				<b>354,000</b>
<b>Total Wastewater Generated, Peak Weekend Flow<sup>1</sup></b>				<b>708,000</b>

Notes:

1. Peak factor 2.0 (based on the close proximity of WWTP, short pipe runs, and new pipe).
2. Wastewater flows associated with the restrooms are accounted for in the project component immediately adjacent to each restroom.
2. All flow values were rounded to the nearest 1,000 gpd.
3. gpd = gallons per day
4. gpm = gallons per minute

The quality of influent wastewater for hotel and entertainment facilities differs from the quality of domestic sewage. This section provides background on the typical quality of influent wastewater at similar hotel and entertainment facilities and identifies the wastewater facilities required to treat it. However, typical hotel/entertainment facility sewage has a higher influent BOD and TSS concentration compared to domestic wastewater, as identified in **Table 3-8**.



**Table 3-8: Typical WWTP Influent Wastewater Quality**

Parameter	Alternative A (mg/L)	Typical Domestic Sewage (mg/L)
BOD	450-600	200-300
TSS	450-600	200-300

Notes:

1. mg/L – milligram per liter

“Shock loading” is also typical of hotel/entertainment facility wastewater. For example, weekend flows are much higher than weekday flows, and evening flows are higher than daytime flows, based on the higher use of similar facilities outside of normal business hours, and the presence of the showroom. The showroom is typically either used during the evening and nighttime hours during the week, or during the afternoon and evening on the weekend. Any wastewater treatment process selected must be able to handle the high strength waste and react well to wide variations in flow.

Based on the wastewater generation rates identified in **Table 3-7**, any wastewater treatment facility must have the capability to treat and/or convey the project’s peak weekend demand of approximately 708,000 gpd. Based on this weekend capacity, **Table 3-9** identifies the proposed design flows for the WWTP. The design flows are higher than the projected flows in order to provide a factor of safety to account for typical diurnal variation. Wastewater flows into a treatment plant at varying rates throughout the day depending on the time of the day, local water usage, and waste flows. For example waste volumes from showers and toilets in a hotel are high during the morning and evening hours, restaurant flows will be high around mealtimes, and the flows drop during the night. Flows are regulated to maintain a fairly constant rate through the membranes by storing the extra volume during peak hours and treating the stored volume during off peak hours. The maximum influent stored at any time is equal to the equalization volume.

The wastewater treatment facilities for Subalternative A-1 should be designed with a wastewater treatment capacity of 0.72 MGD.

**Table 3-9: WWTP Design Flows for Subalternative A-1**

Parameter	Projected Wastewater Flow (gpd)	Design Flow (MGD)
Average Weekday Flow	354,000	0.36
Peak Weekend Flow	708,000	0.72

Notes:

1. gpd = gallons per day
2. MGD = millions of gallons per day

Traditional wastewater treatment options, such as primary clarifiers, activated sludge, conventional filtration, and disinfection, were considered as wastewater treatment plant options. However, due to space and location considerations, a wastewater treatment facility based on a membrane bioreactor treatment process (MBR) was assumed for Subalternative A-1.

The proposed MBR can respond well to significant diurnal changes in influent flow over the course of the day. For example, a typical MBR process can increase its average day flow by a

factor of 1.25 for 3 days or by a factor of 2.0 for one day. Typically, a combination of the equalization volume and treatment rates is used to handle daily fluctuations and peak events. For this project, an equalization volume equal to 15% of the average day influent (54,000 gallons) will maintain a constant treatment rate during the average day (weekday), and the treatment rate can be increased by a factor of 2.0.

Raw or untreated wastewater may be diverted to an emergency storage basin (ESB) during an event with exceedingly high influent flows, treatment process upset, significant mechanical failure, routine maintenance, systems repair, or if effluent quality did not meet minimum standards. The volume of the ESB can range from a minimum of 8 to 24 hours at average day flow. Eight hours would be sufficient for most routine maintenances and repairs. Twenty four hours of storage can handle an extremely high flow event or significant upset or failure. ESB volume is also dictated by the acceptable level of risk, capital cost, and the available space. For this project 12 hours of storage is provided, which is equivalent to approximately 180,000 gallons. The ESB would be constructed with a common wall to the MBR process to allow for the overflow of peak flows from headworks, distribution channels, and process trains into the ESB by gravity.

### 3.3.1 Wastewater Facility Requirements

This section identifies preliminary wastewater collection, wastewater treatment, discharge, and reclaimed water facilities required to manage wastewater generated by the proposed Subalternative A-1. The overall wastewater facilities will be located based on the final design of Subalternative A-1 facilities. All of the recommended wastewater facilities described in this section are preliminary, and should be used for planning purposes only. The process for the wastewater treatment plant is shown in **Figure 3-5**.

The backbone of the wastewater collection system will be a sewage transmission pipeline from the Project to the headworks of the wastewater treatment plant. It is likely that a duplex wet well sewage lift station with a standby pump will be required to convey sanitary sewage to the treatment plant. Recommended design criteria for the lift station are shown in **Table 3-10**. The lift station should be designed to lift the maximum daily flow with one pump out of service.

**Table 3-10: Recommended Sanitary Sewage Lift Station Design Criteria**

Parameter	Value
Purpose	Lift raw water to WWTP facilities
Type	Submersible non-clog centrifugal
Quantity	Three (2 duty, 1 standby)
Controls	Constant speed, level switch start and shutoff

The headworks for the wastewater treatment plant would typically include influent flow measurement, bar and fine screens, and any required grit removal facilities. Due to the sources and quality of the wastewater, it is not expected that grit removal facilities are required at this time. However, fine screens are required to protect excessive fouling of the MBR membranes. The raw influent would be pumped by the collection system pump station through the headworks facility. After flow measurement, influent would be routed to a covered headworks

influent box for distribution to two influent channels. During normal operation, one channel would be in-service, with the other available as a standby. Slide gates would control flow to each channel. Each headworks channel would be sized to match the hydraulic capacity of the plant. **Table 3-11** shows some of the design criteria for the headworks facility.

**Table 3-11: Headworks Design Criteria**

Parameter	Value
Screening facilities	Enclosed cylindrical screen with 3-mm circular perforations, integral shaftless helical scraper/conveyor and compactor, mechanical washer to break up fecal material
Metering facilities	Magnetic flow meter on influent pipe
Odor control	Corrosion resistant plate covered channels, soil filter
Control	Continuous operation

Sewage would travel from the headworks to the MBRs within an enclosed influent distribution force main. The force main would pass through headworks to an influent splitter box that would evenly distribute the flow to the two MBR process trains. Sluice gates would be provided to isolate basins for maintenance. Each MBR process train is divided into three sections; an anoxic section, and an aerobic section, and a membrane section containing the immersed membranes. The proposed design criteria for MBRs are shown in **Table 3-12**.

**Table 3-12: MBR Design Criteria**

Parameter	Value
<b>Design Flows</b>	
Average daily flow:	0.36 MGD
Peak daily flow:	0.72 MGD
MBR process trains:	2
Process train basins:	Anoxic basin, aeration, microfiltration membrane (all basins concrete)
Membrane Type:	Hollow fiber or flat-plate, outside-in flow
Hypochlorite solution strength:	5%

Within the anoxic basin, the influent is mixed with mixed liquor (the mixture of activated sludge, water, and organic matter undergoing treatment) in a tank with a dissolved oxygen content equal to zero. The mixed liquor is pumped back to the anoxic basin from the immersed membrane section of the MBR. The introduction of new influent wastewater to the basin provides a substrate for the return activated sludge to respire and synthesize. The lack of dissolved oxygen in the basin facilitates nitrification and denitrification.

The mixed liquor produced by the anoxic basin would flow by gravity to the adjacent aeration basin. The aeration basin differs from the anoxic basin in that this basin contains dissolved oxygen, which is introduced to the tank through a series of fine bubble diffusers, connected by headers and pumped by a series of blowers. The dissolved oxygen is required to convert dissolved organic material into a filterable solid material. Aeration reduces the BOD and the produces a filterable flocculent.

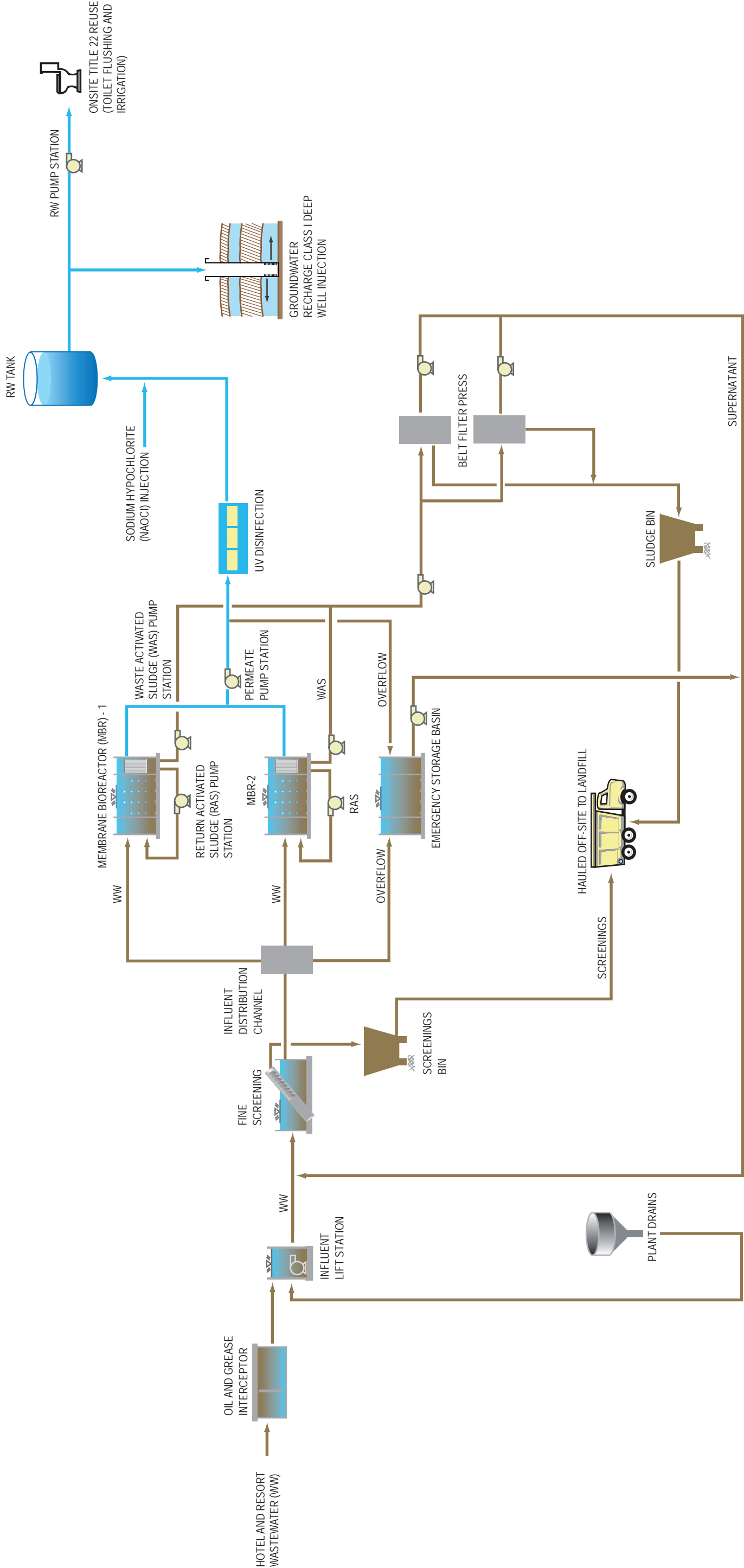


FIGURE 3-5  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
PRELIMINARY WASTEWATER TREATMENT PROCESS FLOW DIAGRAM



The microfiltration membranes have a nominal pore size between 0.1 – 0.4 microns. Suction is used to force water (permeate) through the membrane into the hollow center and to the disinfection process. The mixed liquor that is not forced through the membrane is recirculated back to the anoxic zone. A portion of this recirculated mixed liquor is wasted to the belt press for dewatering and disposal.

Each MBR train contains one permeate pump to force water through the membrane, and there is one standby permeate pump for the overall process that can draw from either train. These pumps can also pump permeate to the backpulse tanks, where water is stored in order to backwash the membrane. The permeate pumps also function as backpulse pumps, which pump permeate from the permeate tanks back to the membranes, and keep solids from accumulating on the membrane surface. The membranes are typically backwashed every 15 minutes, and each backwash lasts about two minutes. The entire backwash process is controlled by a programmable logic controller (PLC), which operates automatic control valves and isolates the membranes from the permeate pumping process. Sodium hypochlorite and/or citric acid is typically injected into the backpulse flow to facilitate membrane cleaning, and prevent regrowth in the membrane modules.

A number of pumps, blowers, chemical storage, chemical metering, control, and electronic facilities are required in order to operate the MBR process. These are typically located in a building near the MBR process. It is also possible for an operations building to be constructed, which could house plant controls, the motor control center, blowers for the MBR process, maintenance facilities, a laboratory, and offices/space for staff. During design development, these facilities will be further defined. Biosolids are a by-product of the MBR process; biosolids would be trucked off-site and disposed of in an approved facility. **Figure 3-3** shows the proposed electrical, controls, and operations building, and the solids handling building.

Disinfection to meet discharge and reclamation virus and coliform water quality standards would be provided by constructing an ultraviolet (UV) disinfection system adjacent to the MBR. UV disinfection facilities are typically contained within a long, narrow steel channel tank, with banks of UV lamps situated in a laminar flowing channel. A weir would control the water level in the channel, ensuring that the lamps are always submerged. Each UV lamp emits a light with a specific wavelength that is capable of inactivating bacteria and virus, preventing them from reproducing. A proposed location for UV facilities is shown adjacent to the MBR tanks on **Figure 3-3**. **Table 3-13** shows a summary of the recommended UV Disinfection design criteria for a typical channel UV system.

**Table 3-13: UV Disinfection Design Criteria**

Parameter	Value
Lamp location	Submersed or In-line
Type of lamps	2020W medium pressure UV lamps
Transmittance	65% through quartz sleeve
Flow metering	Magnetic flow meter

Though the UV facilities would be designed to disinfect the treated wastewater, they do not continue to disinfect the wastewater after it leaves the UV channel. In order to prevent regrowth

of bacteria in the reclaimed water distribution system, sodium hypochlorite is typically added in small quantities. The introduction of this chemical creates a residual concentration of chlorine that persists in the reclaimed water, and ensures that it is safe to use after it leaves the wastewater treatment facility. Typical reclaimed water distribution systems require at least a positive chlorine residual at the point of use, and the dosing of sodium hypochlorite will be adjusted to meet this goal. A dose of 2-3 mg/L for reclaimed water used for on-site irrigation, cooling, or toilet/urinal flushing. Chlorine would be dosed at a location downstream of the UV disinfection facilities, and before reclaimed water is pumped to the reclaimed water storage tank.

Chlorine is a very common disinfectant in the treatment and disinfection of wastewater. Sodium hypochlorite is used throughout the wastewater industry for chlorine disinfection, and when used in accordance with that chemical's MSDS, is safe for this purpose.

### **3.3.2 Operator Certification Requirements**

On trust land, the EPA has jurisdiction but it may follow state guidelines for operator certification. This section contains a brief description of the expected operator certification requirements for the facility. A detailed description of the operations and maintenance program will be prepared following completion of the wastewater treatment plant design.

Florida statutes require anyone who operates a drinking water treatment plant or a domestic wastewater treatment plant to be licensed by FDEP. Beginning May 1, 2011, licensure for Water Distribution System Operators becomes mandatory. To qualify for licensure an applicant must meet minimum educational and work experience requirements for each class of license. A passing score is required on the exam for the type and level license desired (FDEP, 2011d).

Domestic wastewater treatment facilities which are required to provide full treatment and disinfection shall be staffed by a Class C or higher operator 24 hours per day, 7 days per week. The lead/chief operator shall be at minimum Class A, per F.A.C. 62-699.

### **3.4 Reclaimed Water**

Reclaimed water is treated wastewater that has received, at a minimum, secondary-level treatment and basic disinfection at a wastewater treatment facility. There are three stages of wastewater treatment: primary, secondary, and advanced (sometimes called tertiary treatment). During primary treatment, suspended solids are removed by screening and settling. The water is then subjected to secondary treatment where biological decomposition reduces complex organic material into simpler forms. The water is then separated from any remaining organic material and then either disinfected (often by chlorination) and directly discharged, reused, or subjected to advanced treatment. Advanced treatment facilities further remove solids, organic material, nutrients, or other chemicals using physical, chemical, or biological processes. After advanced treatment the water is then disinfected before being discharged (typically to rivers, lakes, or coastal waters) or reused (Martinez and Clark, 2009).

It is expected that the wastewater treatment plant will produce reclaimed water suitable for on-site reuse. On trust land, the EPA would regulate the use of reclaimed water but it may follow state guidelines for reclaimed water use. For the range of uses considered for this project, it



would be expected that the wastewater treatment plant would need to produce disinfected advanced (tertiary) treatment reclaimed water in accordance with Chapter 62-610 of the F.A.C. Treatment requirements vary depending on how reclaimed water is to be used. For landscape irrigation, toilet flushing, and fire protection: secondary treatment, filtration, and high-level disinfection is required (Section III, Chapter 62-610 of the F.A.C.). For cooling water: secondary treatment and basic disinfection is required (Section VII, Chapter 62-610 of the F.A.C.).

Both reclaimed water and other water conservation measures would be utilized maximized to the extent outlined in the Main Street Design Standards (Coconut Creek, 2008). The experience of other similarly sized entertainment facilities has shown that water demands can be significantly reduced when reclaimed water is introduced as an alternative water supply source. Water supply requirements, including the use of reclaimed water, were calculated assuming reclaimed water would be used for toilet flushing, landscape irrigation. No information was provided on cooling towers, but that would be another potential use for reclaimed water.

### 3.4.1 Reclaimed Water Facilities

The overall reclaimed facilities will be located based on the final design of the facilities for Subalternative A-1. All of the recommended water supply facilities described in this Section are preliminary, and should be used for planning purposes only.

It is assumed that reclaimed water would be used for exterior landscape irrigation and toilet flushing. To provide reclaimed water for these purposes, the Project irrigation systems and plumbing supplying the toilets would be separately plumbed to prevent the cross-connection of potable and reclaimed water supplies.

Based on preliminary estimates of reclaimed water demand, it is estimated that the reclaimed water storage tank volume would be approximately 146,000 gallons, which is equivalent to the peak day demand plus a factor of safety. **Table 3-14** presents the proposed reclaimed water storage tank design criteria.

**Table 3-14: Reclaimed Water Storage Tank Design Criteria**

Parameter	Value
Approximate size	0.15 MG
Approximate diameter	28 feet
Approximate height	32 feet
Construction	Welded steel

The on-site reclaimed water reuse facilities will be designed to ensure that compliance with all applicable standards. Typical on-site design requirements include: reclaimed water irrigation facilities marked in a purple color; signage informing the public reclaimed water is used; pipelines in separate trenches a minimum distance away from other water pipelines; and labeling of reclaimed water valves, boxes, and sprinkler heads. The interior plumbing system will have to be plumbed separately from the building's potable water system, and contain no cross connections. The dual plumbing piping systems must be distinctly marked and color-coded.

Two separate reclaimed water pump stations are required for the reclaimed water facilities. All required pump sizes and the configuration would be determined during design. However, the strategy described below assumes reclaimed water is produced and maximized on-site.

The first pump station would pump water from the wastewater treatment plant to the reclaimed water storage tank. This pump station is expected to be a low head pump station that fills the reclaimed water tank to provide system storage.

The second pump station would pump disinfected effluent from the reclaimed water storage tank to the reclaimed distribution system for toilet flushing and landscape irrigation. This pump station would likely need to be a high head pump station to supply reclaimed water to the irrigation system at pressure, and will include multiple duty pumps and one standby pump. Pressure would be maintained in the distribution system by a hydropneumatic tank.

### **3.5 Effluent Disposal**

The wastewater effluent will be discharged either by surface water discharge under the National Pollution Discharge Elimination System (NPDES) Program or Class 1 injection well under the EPA Underground Injection Control (UIC) Program. The regulatory background is provided for each in this section.

#### **3.5.1 Surface Water Discharge**

Surface water disposal consists of discharge of treated municipal wastewater into estuaries, lagoons, canals, rivers, or streams. Discharge into canals is the predominant form of surface-water discharge, though discharges into estuaries are also permitted.

The NPDES program is a federal program established by the Clean Water Act (CWA) to control point source and stormwater discharges. Under Section 402 of the CWA, any discharge of a pollutant from a point source to surface waters (i.e. the navigable waters of the United States or beyond) must obtain an NPDES permit. The NPDES permit requires compliance with both technology-based as well as surface water quality standards (e.g., Water Quality Based Effluent Limitations [WQBELs]).

In 1995, the Florida Department of Environmental Protection's (Florida DEP) Office of Wastewater Management received authorization from the U.S. Environmental Protection Agency (EPA) to administer the NPDES wastewater program in Florida. Since that time, federal NPDES permit requirements for most wastewater facilities or activities (domestic or industrial) that discharge to surface waters are incorporated into a state-issued permit (FDEP, 2011c).

The most probable point of surface water discharge would be into the canal system, which is located throughout the State of Florida. The existing canal system eventually empties into the Atlantic Ocean. The proposed project site does not connect directly into the existing canal system. The nearest POCs to the canal system are over three miles from the project site. The northern discharge point is 3.5 miles to the north along SR 7 (HWY 441) north the intersection of Loxahatchee Road (HWY 827) and SR 7. The southern discharge point is 3.4 miles to the south of the project site along SR 7 (HWY 441) between the cross streets West Atlantic

Boulevard and Southgate Boulevard. Discharging effluent to either canal would require construction of piping in public streets, which falls under the jurisdiction of both the State of Florida and local jurisdictions. Other municipalities in the State of Florida that have considered surface water discharge as a means of effluent disposal have abandoned the option mentioning that “Although as surface water discharge is theoretically permittable under the existing rules and regulations, it was considered to be a formidable and costly review process of approximately two years, with low prospect of a successful resolution” (FWR, 2000).

Discharge to a canal located on state lands would require the STOF to obtain permits and/or easements to allow for construction of three miles of effluent pipeline. Additionally, an NPDES permit issued by the Florida DEP would be required.

### **3.5.2 Injection Well**

An injection well would inject treated wastewater into the Floridan aquifer. For on-site discharge, an injection well would be located near the wastewater treatment facilities, as shown in **Figure 3-3**. This minimizes the amount of piping required from the MBR to the injection well.

The upper and lower Floridan aquifers are 1,000 to 2,500 feet deep. The upper Floridan aquifer is separated from the Biscayne aquifer by impermeable clayey layers (NRPMD, 2009). In Broward County, the quality of the water in the Floridan Aquifer is not as good as water from the Biscayne Aquifer. While the Floridan Aquifer is the major source of water in other parts of the state, its use is limited in South Florida because it is brackish (Broward County, 2011).

The EPA regulates the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal. Because the injection well would be located on Trust land, Region 4 of the EPA would have jurisdiction. The UIC oversees the operation of injection wells to prevent contamination of underground sources of drinking water (USDW). The Project injection well discharge falls under the Class 1 well category, which is for injection into deep, isolated rock formations that are thousands of feet below the lowermost USDW (EPA, 2011 and EPA, 2011b).

Injection wells are the most common form of effluent disposal in Florida. The Floridan aquifer, which is the aquifer in which the effluent disposal via an injection well would take place, extends below the entire project site and much of the region. Therefore, it is likely that this disposal method will be feasible for the Project. This method is preferable over the surface water alternative because it would be on-site and as such only subject to the federal regulations as dictated by the EPA.

### **3.6 Sludge Disposal**

It is anticipated that biosolids produced by the project’s wastewater treatment plant will be taken to an off-site landfill in accordance with all regulatory requirements. Prior to off-site disposal, biosolids will be dewatered using a belt filter press. The dewatered sludge, also known as cake, would be periodically hauled to a Class III landfill for disposal. Although the solids handling building containing the dewatering equipment that produces biosolids is on-site, the F.A.C. will have jurisdiction over biosolids disposal off-site.

Recent amendments to the biosolids chapter of the F.A.C. require: a „Treatment Facility Biosolids Plan’ be prepared; a „Treatment Facility Biosolids Annual summary’ be prepared; minimum quarterly monitoring be conducted; and biosolids generation and hauling records be maintained.

### **3.7 Subalternative A-1 Summary**

Subalternative A-1 is similar in size and program to the preferred project, Alternative A, but differs in that the water and wastewater facilities for Subalternative A-1 would be handled on-site.

Two groundwater wells screened approximately 100 to 200 feet below ground surface in the Biscayne aquifer would provide the water supply; water would be treated and then stored in a potable water tank. An MBR advanced treatment plant would treat wastewater generated by the project and produce reclaimed water suitable for re-use in irrigation, cooling towers, and toilet flushing. Storage tanks, dewatering equipment, and disinfection are some ancillary facilities that would be necessary. An on-site injection well that injects into the Floridan aquifer at over 1,000 feet below ground surface would provide disposal in close proximity to the plant for effluent that is not re-used.

**Table 3-15: Subalternative A-1 Key Design Parameters**

<b>Parameter</b>	<b>Value</b>
Water Demand	635,000 gpd
Potable Water Tank	1.7 MG
WWTP Design Flow	0.72 MGD
Reclaimed Water Tank	0.15 MG

## SECTION 4: ALTERNATIVE B

This section presents the requirements for on-site water and wastewater treatment associated with Alternative B. Alternative B is similar to Subalternative A-1 in that water and wastewater treatment will be handled on-site. However, Alternative B represents a reduced intensity version of Subalternative A-1. A map showing Alternative B is included as **Figure 4-1**.

### 4.1 Water Demands and Supply

Preliminary projections of the water supply needed to reliably meet water demand for Alternative B are summarized in **Table 4-1**. These projections are based on the Broward County flow rates. These numbers are preliminary and are for planning purposes only.

**Table 4-1: Projected Water Demands for Alternative B**

Project Component	Quantity	Units	Unit Flow	Average Day Flow (gpd)
Hotel	500	rooms	243 gpd/room	122,000
Hotel Lobby	10,300	sf	-	-
Dining / Restaurants	47,600	sf	699 gpd/1,000 sf	33,000
Retail	68,200	sf	346 gpd/1,000 sf	24,000
Back-of-House	67,800	sf	178 gpd/1,000 sf	12,000
Circulation	20,900	sf	-	-
Spa	11,200	sf	154 gpd/1,000 sf	2,000
Club / Lounge	19,500	sf	346 gpd/1,000 sf	7,000
Conference Facility	80,900	sf	172 gpd/1,000 sf	14,000
Showroom Facility	31,300	sf	172 gpd/1,000 sf	5,000
Restrooms <sup>3</sup>	7,400	sf	-	-
Outdoor Terrace	-	sf	346 gpd/1,000 sf	-
Valet	2,000	sf	-	-
Vestibule	2,700	sf	-	-
Parking Structure (6 levels)	2,250	sf	-	-
Water/Wastewater Treatment Plant	18,700	sf	103 gpd/1,000 sf	2,000
Fire / Police Station	20,000	sf	178 gpd/1,000 sf	4,000
<b>Average Day Demand</b>				<b>225,000</b>
<b>Average Day Demand with 15% Contingency</b>				<b>259,000</b>
<b>Maximum Day Demand<sup>1</sup></b>				<b>355,000</b>
<b>Peak Hour Demand<sup>2</sup></b>				<b>588,000</b>

Notes:

1. Maximum Day factor 1.37
2. Peak Hour factor 2.27 (Broward County Guidelines, **Appendix B**).
3. Water demands associated with the restrooms are accounted for in the demand calculation for the project component immediately adjacent to each restroom.
4. gpd = gallons per day

See *Section 3.2, Water Supply*, for a discussion of the groundwater aquifer and groundwater quality.

The water supply for Alternative B would be supplied by two on-site wells. The projected water demand for Alternative B is the maximum day demand summarized below in **Table 4-2**. Since water is lost during treatment, water supply requirements for raw water prior to treatment must account for these losses. Treatment losses are expected to be approximately 15%, so the minimum firm recommended water supply below is 15% greater than the demand in **Table 4-2**, listed below in the first column. The on-site facilities are shown in **Figure 4-2**. The anticipated well capacity, location, treatment, and operating strategy would be developed further during the design phase.

**Table 4-2: Projected Water Demand Requirements for Alternative B**

Water Demand without Reclaimed Water (gpm) <sup>1,2</sup>	Water Demand with Reclaimed Water (gpm) <sup>3</sup>	Minimum Recommended Firm Water Supply (gpm) <sup>4</sup>
355,000	299,000	408,000

Notes:

1. gpd = gallons per day.
2. Maximum day demand, **Table 4-1**.
3. Reclaimed water demand of 56,000 gpd subtracted from 355,000 gpd.
4. Water demand without reclaimed water increased 15% to account for losses during water treatment.

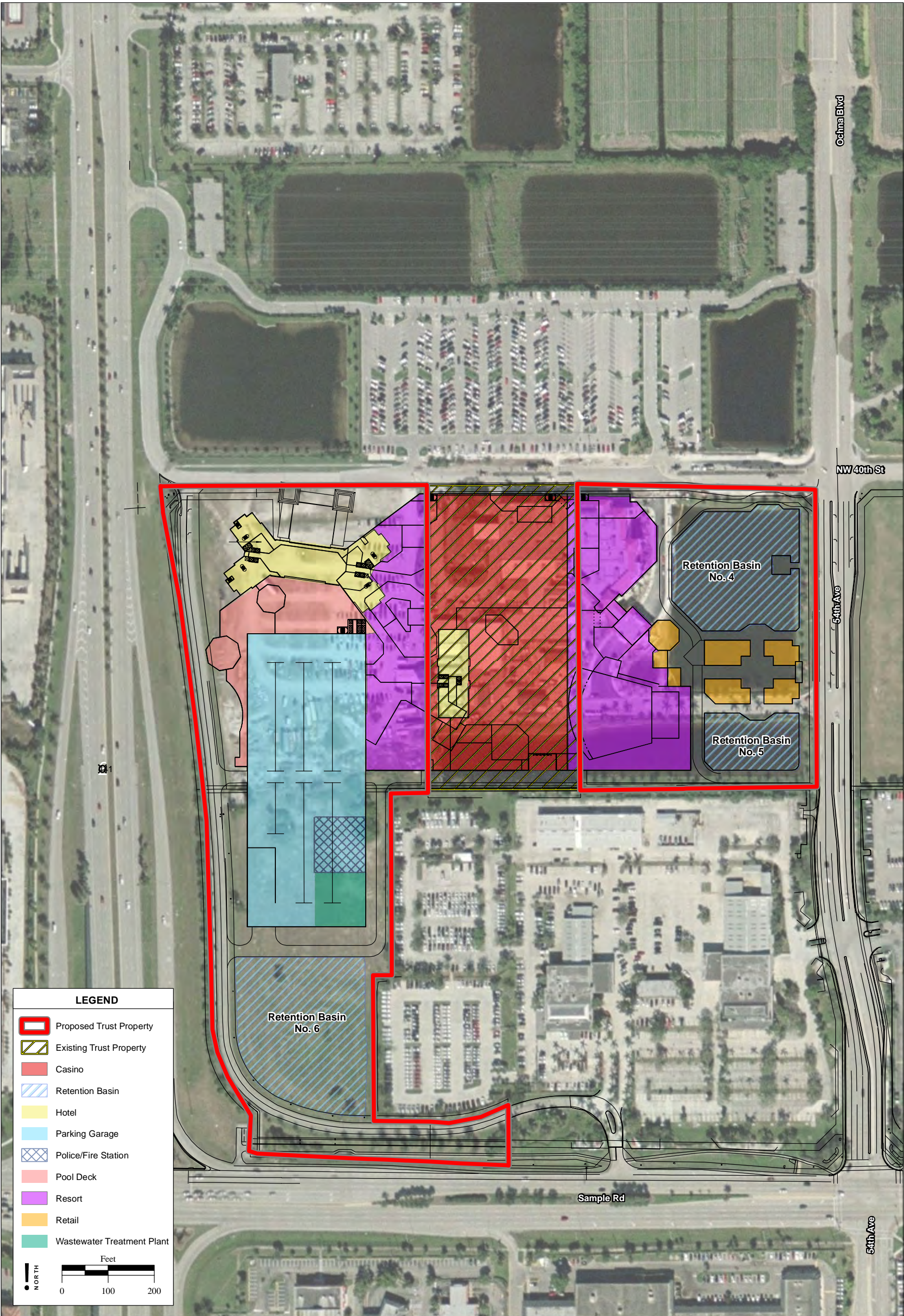
#### 4.1.1 Water Facility Requirements

See *Section 3.2.1, Water Facility Requirements*, for a detailed description of the type of water facilities required to supply water to the project for Alternative B. **Table 4-3** summarizes the water storage tank and pump station requirements Alternative B.

**Table 4-3: Recommended Water Storage Tank and Pump Station Design Criteria**

Parameter	Value
<b>Water Storage Tank</b>	
Approximate size	1.4 MG
Approximate diameter	77 feet
Approximate height	40 feet
Construction	Welded steel
<b>Potable Water Pump Station</b>	
Low service pump number	3 (2 duty, 1 stand-by)
Low service pump type	Variable speed turbine
High service pump number	2
Hydro pneumatic tank approximate size	2,000 gallons



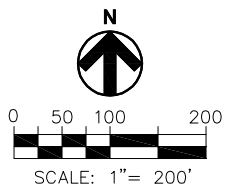


SOURCE: Friedmutter Group, 6/2010; Aerial Express aerial photograph, 4/2008; AES, 2011

FIGURE 4-1  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
ALTERNATIVE B - REDUCED INTENSITY PROJECT







**FIGURE 4-2**  
SEMINOLE TRIBE OF FLORIDA FEE-TO-TRUST PROJECT  
WATER AND WASTEWATER FEASIBILITY STUDY  
**ALTERNATIVE B - ON-SITE WATER AND WASTEWATER FACILITIES**



## 4.2 Wastewater

The projected wastewater flows for Alternative B are identified in **Table 4-4**. These projections are based on the profile of Alternative B identified in the EIS.

**Table 4-4: Projected Wastewater Flows for Alternative B**

Project Component	Quantity	Units	Unit Flow	Average Day Flow (gpd)
Hotel	500	rooms	217 gpd/room	109,000
Hotel Lobby	10,300	sf	-	-
Dining / Restaurants	47,600	sf	624 gpd/sf	30,000
Retail	68,200	sf	138 gpd/sf	9,000
Back-of-House	67,800	sf	159 gpd/sf	11,000
Circulation	20,900	sf	-	-
Spa	11,200	sf	138 gpd/sf	2,000
Club / Lounge	19,500	sf	309 gpd/sf	6,000
Conference Facility	80,900	sf	153 gpd/sf	12,000
Showroom Facility	31,300	sf	153 gpd/sf	5,000
Restrooms <sup>3</sup>	7,400	sf	-	-
Outdoor Terrace	-	sf	309 gpd/sf	-
Valet	2,000	sf	-	-
Vestibule	2,700	sf	-	-
Parking Structure (6 levels)	2,250	spaces	-	-
Water Treatment Plant	18,700	sf	92 gpd/sf	2,000
Fire / Police Station	20,000	sf	159 gpd/sf	3,000
<b>Total Wastewater Generated, Average Day Flow</b>				<b>189,000</b>
<b>Total Wastewater Generated, Average Day Flow with 15% Contingency</b>				<b>217,000</b>
<b>Total Wastewater Generated, Peak Weekend Flow<sup>2</sup></b>				<b>434,000</b>

Notes:

1. Peak factor 3.50 (Broward County Guidelines, **Appendix B**).
2. Peak factor 2.0 (based on the close proximity of WWTP, short pipe runs, and new pipe).
3. Wastewater flows associated with the restrooms are accounted for in the project component immediately adjacent to each restroom.
4. All flow values were rounded to the nearest 1,000 gpd.
5. gpd = gallons per day
6. gpm = gallons per minute

See **Table 3-8** and *Section 3.3, Wastewater*, for a description of the anticipated wastewater quality generated by Alternative B. Based on the wastewater generation rates identified in **Table 4-4**, any wastewater treatment facility must have the capability to treat and/or convey the project's maximum peak day flows of approximately 434,000 gpd. Based on this peak day flow, **Table 4-5** identifies the proposed design flows for the WWTP.



As described in *Section 3.3, Wastewater*, the design flows are higher than the projected flows in order to provide a safety factor for design to account for the typical diurnal variation.

**Table 4-5: WWTP Design Flows for Alternative B**

Parameter	Projected Wastewater Flow (gpd)	Design Flow (MGD)
Average Weekday Flow	217,000	0.22
Peak Weekend Flow	434,000	0.44

gpd = gallons per day

The wastewater treatment facilities for Alternative B must be designed with a wastewater treatment capacity of 0.44 MGD.

#### 4.2.1 Wastewater Facility Requirements

See *Section 3.3.1, Wastewater Facility Requirements*, for a detailed description of the type of wastewater facilities required to treat the wastewater generated by the project for Alternative B. **Table 4-6** summarizes the reduced capacity membrane bioreactor design criteria for Alternative B.

**Table 4-6: MBR Design Criteria**

Parameter	Value
<b>Design Flows</b>	
Average daily flow:	0.22 MGD
Peak daily flow:	0.44 MGD
MBR process trains:	2
Process train basins:	Anoxic basin, aeration, microfiltration membrane (all basins concrete)
Membrane Type:	Hollow fiber or flat-plate, outside-in flow
Hypochlorite solution strength:	5%

gpd = gallons per day

The expected volume for equalization is 33,000 gallons. This will moderate the peak day flows in the WWTP.

#### 4.2.2 Operator Certification Requirements

See *Section 3.3.2, Operator Certification Requirements*, for a description of operator qualifications. Operator qualifications will not differ for either Subalternative A-1 or Alternative B.

#### 4.3 Reclaimed Water

See *Section 3.4, Reclaimed Water*, for a detailed description of the reclaimed water facilities required to maximize reclaimed water use for Alternative B. **Table 4-7** summarizes the reduced capacity water storage and pump station design criteria for Alternative B.

**Table 4-7: Reclaimed Water Storage Tank Design Criteria**

Parameter	Value
Approximate size	0.10 MG
Approximate diameter	23 feet
Approximate height	32 feet
Construction	Welded steel

#### **4.4 Effluent Disposal**

The methods of effluent disposal for Alternative B are the same as for Subalternative A-1. See *Section 3.5, Effluent Disposal*, for a description of the alternatives. An injection well is preferable over the surface water alternative because it would be on-site and as such only subject to the federal regulations as dictated by the EPA. Additionally, obtaining over three miles of pipeline easements and an NPDES permit in order to construct a surface water discharge would likely be more difficult, costly, and time intensive to complete.

#### **4.5 Sludge Disposal**

See *Section 3.6, Sludge Disposal*, for a detailed description of the sludge disposal facilities and recent changes to the sludge disposal requirements of the State of Florida. The facilities required for Alternative B will be the same as those required for Alternative A-1, with reduced capacity.

#### **4.6 Alternative B Summary**

The water and wastewater facilities for Alternative B would be on-site. Two groundwater wells screened approximately 100 to 200 feet below ground surface in the Biscayne aquifer would provide the water supply; water would be treated and stored in the potable water tank. An MBR advanced treatment plant treats wastewater generated by the project and produces reclaimed water suitable for re-use in irrigation, cooling towers, and toilet flushing. Storage tanks, dewatering equipment, and disinfection are some ancillary facilities that will be necessary. An on-site injection well that injects into the Floridan aquifer at over 1,000 feet below ground surface provide disposal in close proximity to the plant for effluent that is not re-used.

**Table 4-8: Alternative B Key Design Parameters**

Parameter	Value
Water Demand	408,000 gpd
Potable Water Tank	1.4 MG
WWTP Design Flow	0.44 MGD
Reclaimed Water Tank	0.10 MG

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## **SECTION 5: RECOMMENDATIONS**

The following preliminary recommendations with respect to the proposed Project alternatives are based on the analysis in this feasibility study. With Alternative A as the preferred alternative, these recommendations are specific to that alternative.

### **5.1 Water**

Connect to City of Coconut Creek in accordance with the agreement that the STOF and the City entered into January 2011 for the City to provide the Project with water service adequate to supply:

- Maximum water demand of 371 gpm
- Peak hour demand of 615 gpm

While an on-site water treatment plant is expected to provide potable water in the supply and quantity required for the project, the cost to construct, permit, operate, and maintain these facilities will far outweigh the benefit of operating independent of the City.

### **5.2 Wastewater**

Connect to City of Coconut Creek in accordance with the agreement that the STOF and the City entered into January 2011 for the City to provide the Project with wastewater service adequate for:

- Average day flow with 15% contingency of 0.342 MGD
- Peak day flow of 1.197 MGD

While an on-site wastewater treatment plant would provide the Tribe with treatment and disposal of the wastewater generated by the project, it is not the preferred option. The cost to construct, permit, operate, and maintain these facilities will far outweigh the benefit of operating independent of the City.

### **5.3 Reclaimed Water**

If reclaimed water is to be used in the future for toilet flushing, then it is recommended that dual plumbing be installed when the Project is constructed. When City reclaimed water lines are extended to the Project, and the Project can connect to these lines, it is recommended that:

- The Project's landscape irrigation system be connected to reclaimed water
- The Project's dual plumbed lines for the toilets and urinals be connected to reclaimed water

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## SECTION 6: REFERENCES

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## **APPENDIX A**

### City of Coconut Creek Utilities Agreement



## COCONUT CREEK FEE TO TRUST LANDS MITIGATION AGREEMENT

THIS Coconut Creek Fee To Trust Lands Mitigation Agreement, (hereinafter "Agreement") made and entered into this 27<sup>th</sup> day of January, 2011, by and between the CITY OF COCONUT CREEK, a municipal corporation of the State of Florida (hereinafter "CITY"), and the SEMINOLE TRIBE OF FLORIDA, a federally-recognized Indian tribe organized pursuant to Section 16 of the Indian Reorganization Act of 1934 (hereinafter "STOF"):

**WHEREAS**, CITY and STOF are concerned with the health and general welfare of the residents of the CITY and the STOF tribal members; and

**WHEREAS**, STOF filed an application for a Planned MainStreet Development District (PMDD) with CITY, detailing its future development plans for the properties within the CITY that are owned or controlled by STOF as more fully described in Exhibit A, which CITY has approved (Coconut Creek Lands); and

**WHEREAS**, as part of its PMDD application, STOF has requested abandonment of N. W. 40<sup>th</sup> Street, which CITY has approved; and

**WHEREAS**, the lands owned or controlled by STOF and N. W. 40<sup>th</sup> Street constitute the "Coconut Creek Fee to Trust Lands" as more fully described in Exhibit B; and

**WHEREAS**, as part of the approved PMDD, STOF has proposed various improvements designed to ameliorate the impacts of its proposed development plans for the Coconut Creek Fee to Trust Lands on CITY and the impacts upon the residents of the CITY; and

**WHEREAS**, STOF also has applied to the U. S. Department of the Interior, Bureau of Indian Affairs (“BIA”) to take the Coconut Creek Fee to Trust Lands identified in Exhibit B into trust for the use and benefit of the STOF; and

**WHEREAS**, CITY has objected to STOF’s application for trust status for the Coconut Creek Fee to Trust Lands; and

**WHEREAS**, if the BIA takes the Coconut Creek Fee to Trust Lands into trust for the use and benefit of the STOF, said lands will no longer be subject to the jurisdiction of the CITY; and

**WHEREAS**, on April 7, 2010, the State of Florida and the STOF entered into a **Gaming Compact Between the Seminole Tribe of Florida and the State of Florida (Gaming Compact)**, with respect to the operation of Covered Games, as defined therein, on the STOF’s Indian Lands as defined by the Indian Gaming Regulatory Act, 25 U.S.C., ss. 2701 *et seq.*, which was affirmatively approved by the Secretary of the Interior and published in the Federal Register on July 6, 2010; and

**WHEREAS**, STOF, as a responsible sovereign government doing business in the CITY, recognizes that STOF’s long-term governmental and business interests are best served by accommodating and resolving the legitimate needs and concerns of residents of the CITY as evidenced by its commitments in the approved PMDD; and

**WHEREAS**, STOF desires to assure CITY that STOF will honor its commitments evidenced in the approved PMDD as outlined in this Agreement even if the Coconut Creek Fee to Trust Lands are ultimately taken into trust;

**WHEREAS**, this Agreement represents a good faith concerted and negotiated effort on the part of CITY and STOF to achieve a positive and constructive resolution of significant issues that

could have otherwise negatively impacted the goals and obligations as between CITY and STOF to the detriment of both parties and the residents of the CITY and STOF tribal members; and

**WHEREAS**, this Agreement reflects an enhancement of the relationship between the CITY and STOF, and a continuing desire by CITY and STOF to take a proactive approach to resolve issues for the benefit of the residents of the CITY and STOF tribal members;

**NOW THEREFORE**, each party hereto agrees that good and valuable consideration has been given and received by such party as consideration for entering into this Agreement, the adequacy and sufficiency of which the parties hereby acknowledge, and further in consideration of the mutual terms, conditions, promises, covenants, and payments hereinafter set forth, CITY and STOF agree as follows:

#### **DEFINITIONS**

**“Baseline Net Win”** means the average Net Win for the previous three (3) years that the payment is first made to the City of Coconut Creek under Paragraph A. 3 (a) of this Agreement.

**“Class III Gaming Activities”** means the forms of Class III gaming defined in 25 U.S.C. s. 2703(8) and by the regulations of the National Indian Gaming Commission.

**“Coconut Creek Casino”** means the existing casino and accessory uses on STOF Trust Land, on the south side of N. W. 40<sup>th</sup> Street, and not a part of the Seminole PMDD.

**“Covered Games” or “Covered Gaming Activity”** means the Class III gaming activities included in the definitions in the *Gaming Compact*.

**“DRI”** means the Commerce Center of Coconut Creek Development of Regional Impact.



**“Fee to Trust Lands”** means the approximately 47 acres for which the STOF has a pending

Application for Trust Status, including tracts B, C, D, G, H, portions of Tract 66 and a portion of NW 40<sup>th</sup> Street.

**“Gaming Compact”** means the Gaming Compact Between the Seminole Tribe of Florida and the State of Florida, executed April 7, 2010.

**“MainStreet Design Standards”** means the MainStreet Design Standards adopted by the City of Coconut Creek, dated December 9, 2004, and amended November 13, 2008.

**“Municipal Service Provider Agreement”** means the Intergovernmental Agreement (“IGA”) entered into between the City of Coconut Creek and the STOF dated September 10, 1999, as interlineated on April 19, 2000, and May 11, 2000, and amended on October 12, 2006.

**“Net Win”** means the total receipts from the play of all Covered Games less all prize payouts and free play or promotional credits issued by the Tribe at the Coconut Creek Casino or any gaming facility operated by STOF located within the municipal boundaries of the City of Coconut Creek.

**“PMDD”** means the Seminole Planned Mainstreet Development District for the Seminole Tribe of Florida dated 1/27/2011, over property owned or controlled by the STOF, generally described as a portion of Tract 66, Block 89 of the Palm Beach Farms Plat, Tracts C, D, G, H and a portion of Tract B of the Commerce Center of Coconut Creek Plat (Plat Book 131, Page 30, Broward County) AND A PORTION OF N.W. 40<sup>th</sup> ST. consisting of approximately 45.65 acres. *MS.*

**“Secretary”** means the Secretary of the Interior *MS.*

**“Tract 65”** means Tract 65, Block 89 of the Palm Beach Farms Plat No. 3 as recorded in Plat Book 2, Pages 45-54, of the Public Records of Palm Beach County.

**“Trust Lands”** means property held in trust by the Bureau of Indian Affairs for the benefit of the STOF.

**A. STOF OBLIGATIONS AND COMMITMENTS**

1. Until the Coconut Creek Fee to Trust Lands are taken into trust, STOF agrees to comply with the approved PMDD, other development approvals, and other CITY rules and regulations applicable to the Coconut Creek Fee to Trust Lands.

2. Once the Coconut Creek Fee to Trust Lands are taken into trust, and all opportunities to challenge same have expired, and any challenges thereto have been resolved in favor of STOF, STOF agrees to:

a. **PMDD Related Obligations**

Comply with the MainStreet Design Standards as modified by the approved PMDD including specifically the height limitations, development densities, off-site improvements, approved levels of service, and emergency vehicle access requirements as set forth in the approved PMDD. The STOF shall have the flexibility to otherwise modify its plans, phasing or scope to meet economic and constructability considerations provided that such modifications do not exceed the height limitations, development densities, offsite improvements, approved levels of service, and compromise emergency vehicle access requirements as set forth in the approved PMDD. However, further modifications to the MainStreet Design Standards, as modified by the approved PMDD, shall be limited to those necessary to meet constructability considerations and shall be approved in writing by CITY prior to becoming effective, which approval shall not be unreasonably withheld.

b. **Emergency Services Operations**

Plan for and install as part of the construction of the hotel authorized in the PMDD, Emergency Communications infrastructure consisting of antennas, repeaters, or other communications equipment. Specifications shall be recognized industry standards, as approved by the CITY Manager and STOF. At a minimum, STOF shall provide an 8 foot x 8 foot space on the roof area of the hotel, or other mutually agreed upon location with a line of sight to City Hall, to install antennas, and a 10 foot x 10 foot IDF space or separate room on one of the very top floors to hold the electronics cabinets. CITY will be required to obtain a permit from STOF before actual installation of Emergency Communications infrastructure. Said permit shall not be unreasonably withheld. Further, the City acknowledges that said permit may require approval from the BIA pursuant to 25 CFR Part 169. The STOF shall undertake reasonable good faith efforts to secure said approval or a determination that such approval is not required as part of the trust application and approval of trust status for the Coconut Creek Fee to Trust Lands, or as otherwise upon the Effective Date or as soon thereafter as possible.

STOF shall establish an Emergency Management Plan with the CITY to facilitate return to normal operations of the CITY after a declared emergency. The hotel shall be considered an alternate Emergency Operations Center (EOC) should the CITY's Primary and Secondary EOCs become inoperable as a result of the declared emergency. STOF shall make the first floor of rooms in the hotel available, as may be practical, for the CITY to conduct Emergency Operations. STOF shall make hotel rooms available, as may be practical, to house CITY employees during recovery efforts. The STOF shall have a right to reasonable reimbursement for such costs and expenses. The Primary EOC is currently located at the CITY Hall at 4800 W. Copans Road, Coconut Creek,

Florida. The Secondary EOC is currently located at the Community Center, 1100 Lyons Road, Coconut Creek, Florida.

c. Ensure that any proposed development on the existing Trust Land (Tract 65) does not cause development on the Coconut Creek Fee to Trust Lands to become inconsistent with the provisions of Paragraph A.1. or A.2.a of this Agreement.. In addition, STOF agrees to limit the number of customer parking spaces on the existing Trust Land (Tract 65) to no more than 10 spaces.

3. **Annual Tribal Contribution.** To assist the CITY in defraying the costs and expenses which the CITY will incur as a result of the Coconut Creek Fee to Trust Lands being taken into trust and the anticipated impacts of the development to occur thereon, the Seminole Tribe shall make an Annual Tribal Contribution to the CITY for so long as gaming is conducted on any of STOF's trust lands within the boundaries of CITY, pursuant to the terms set forth in sections a. through c. below,

**a. Payments**

The STOF shall pay the CITY a pro-rated annual amount of \$2,750,000.00 payable in twelve (12) equal monthly installments. Twelve months after commencement of the Annual Tribal Contribution of \$2,750,000.00, the payment shall be adjusted annually based on the then current Consumer Price Index, U.S. Department of Labor, All Urban Consumers, Miami/Fort Lauderdale area ("CPI") which shall be calculated in accordance with Exhibit "C" attached hereto.

**b. Commencement of Payments.**

The first payment will be due the first day of the month after the Coconut Creek Fee to Trust Lands have been taken into trust, and all opportunities to challenge same have expired, and all challenges have been resolved in favor of the STOF.

**c. Reduction of Payment**

Payments to the CITY shall be reduced corresponding to a reduction in Net Win. For purposes of this Agreement, "Net Win" is defined to mean the total receipts from the play of all Covered Games less all prize payouts and free play or promotional credits issued by the Tribe at the Coconut Creek Casino or any gaming facility operated by STOF located within the municipal boundaries of CITY. "Covered Games" or "Covered Gaming Activity" means the Class III gaming activities included in the definitions in the *Gaming Compact*.

If Net Win drops ten percent (10%) or more below Baseline Net Win, payments to the CITY shall be reduced by two (2) times the percentage that the Net Win drops below the Baseline Net Win. If Net Win drops fifty percent (50%) or more below Baseline Net Win, payments to the CITY shall be reduced to zero. "Baseline Net Win" is defined as average Net Win for the previous three (3) years that the payment is first made to the CITY under Paragraph A.3 a. above.

As long as the Net Win remains ten percent (10%) or more below the Baseline Net Win, calculations will be performed every year to determine the payment for the following year. If the STOF's annual Net Win subsequently equals or exceeds the Baseline Net Win, then the STOF's payments due to the CITY shall return to the CPI adjusted amount and be paid without any reduction, but may be reduced again under the provisions set forth above.

**4. One Time Payment.**

However, if the Annual Tribal Contribution described in Paragraph A.3.a. and A.3.b. is not paid to CITY by STOF within three (3) years from the date of the execution of this Agreement, then the STOF agrees within thirty (30) days of the third (3<sup>rd</sup>) anniversary of the execution of this Agreement to pay to the CITY a one-time payment in the amount of Three Million

Dollars (\$3,000,000.00) in consideration for the CITY's performance of its obligations pursuant to this Agreement to that date and in consideration for the CITY's release of the STOF's obligation to purchase a minimum five acre parcel for the CITY as set forth in Paragraph 3.2. of the Municipal Service Provider Agreement between the parties hereto dated September 10, 1999, as interlineated on April 19, 2000 and May 11, 2000 and as amended on October 12 2006. In the event the Coconut Creek Fee to Trust Lands are subsequently taken into Trust by the BIA after the three (3) year period set forth above, and the other provisions contained in Paragraph A.3.b. have been met, the payment provisions set forth in Paragraph A.3. above shall commence.

**5. Educational Foundation or Trust Fund.**

a. STOF and CITY shall sponsor an educational foundation or trust fund for the benefit of Coconut Creek residents, students of Coconut Creek public schools, or children of employees of the City. The STOF and the City agree that one eleventh of the Annual Tribal Contribution required under Paragraph A.3. above shall be paid directly to the foundation or trust fund. The purposes of the foundation or trust fund shall be to provide after school tutoring programs for elementary students, college test preparation courses for high school students, college academic and leadership scholarships and/or any other educational programs that the Board of Trustees of the foundation or trust decide that benefit the residents, students of Coconut Creek public schools, or children of employees of the City. The foundation or trust fund Board of Directors will consist of two (2) members designated by STOF, two (2) members designated by the Coconut Creek City Commission, and one (1) appointed educator, who shall be selected by the four appointed Board members. Such educator shall be employed by an educational institution located within the City of Coconut Creek.



b. In addition, STOF may, in its sole discretion, hold an annual fund-raising event for the foundation or trust fund at the Casino at no cost to the foundation or trust fund.

## **B. CITY OBLIGATIONS AND COMMITMENTS**

1. In addition to all the other obligations and commitments set forth in this Agreement, and as consideration for the STOF Obligations and Commitments, CITY agrees to provide to the Coconut Creek Fee to Trust Lands the same services under the same terms and conditions as it provides to Tract 65, pursuant to the Municipal Service Provider Agreement, dated September 10, 1999, as interlineated on April 19, 2000, and May 11, 2000, and amended on October 12, 2006. These services are specifically those enumerated in Sections 1.1 of said Agreement, entitled "Water and Wastewater Services", Section 1.2 of said Agreement, entitled "Fire, Fire Rescue and Emergency Medical Services", Section 1.3 of said Agreement as amended, entitled "Police Services", and Section 1.4 of said Agreement, entitled "Garbage, Recycling and Construction and Demolition Debris".

2. CITY and STOF acknowledge that STOF has pending an Application for Trust Status (Trust Application") for approximately 47 acres (Coconut Creek Fee to Trust Lands) with the BIA. In specific consideration for the mutual terms, conditions, promises, covenants, payments, and improvements set forth in this Agreement, the CITY within thirty (30) days after the execution of this agreement agrees to formally withdraw all of its negative comments and objections to the STOF Trust Application and the proposed development plans and execute a letter to the BIA supporting the STOF Trust Application and proposed development plans as subject to the terms and

conditions of this Agreement. Furthermore, the CITY shall submit to the BIA a Resolution supporting the STOF Trust Application as subject to the terms and conditions of this Agreement and agrees to attend any meetings with BIA as reasonably requested by the STOF. The CITY agrees to execute in a timely manner any agreement and documents required by BIA that fulfill the goals and objectives of this Agreement. The CITY agrees to act in good faith in support of and further agrees to do nothing that would delay or impede in any way, the timely processing of the STOF Trust Application as subject to the terms and conditions of this Agreement.

3. CITY shall agree to reasonable use by STOF of City's rights of way for stormwater drainage from the Commerce Center of Coconut Creek, including the Coconut Creek Fee to Trust Lands subject to the CITY's reasonable requirements.

4. CITY acknowledges that all necessary rights-of-way and/or easements to construct the roadway and landscape improvements and enhancements enumerated in the approved PMDD are not currently in public ownership. CITY agrees that it shall have the sole responsibility to acquire such rights-of-way and easements, and shall not look to STOF for right-of-way/easement acquisition. The CITY further agrees that STOF shall not be responsible to construct the roadway and landscape improvements and enhancements in the approved PMDD unless the right-of-way/easement for such roadway and landscape improvements and enhancements has been dedicated by the property owner to the CITY or acquired by CITY or is otherwise available for construction. In the event all of the required right-of-way/easements have not come into public ownership, at the direction of the CITY, STOF shall be required to construct only that portion of the roadway and landscape improvements and enhancements on the available public right-of-way/easement. The CITY further agrees that STOF shall not be responsible for the permitting application fees for:

i. the roadway and landscape improvements and enhancements

ii. the relocation of any canals or wetland mitigation for potential wetland impacts associated with the construction of roadway and landscape improvements and enhancements. CITY recognizes that adjoining property owners are obligated to dedicate right-of-way for roadway and landscape improvements, pursuant to Ordinance No. 2010-006 approving the MainStreet Development of Regional Impact (DRI).

5. CITY agrees to the renaming of streets and to allow off-site and on-site directional signage and identifying signage for the STOF property on U.S. 441/SR 7, Lyons Road, Sample Road, Banks Road, Cullum Road, and Wochna Boulevard at time of construction of improvements on these roads as permitted by County or State agencies. STOF shall be permitted to place signs directing traffic to U.S. 441/SR 7, Lyons Road, Sample Road, Banks Road, Cullum Road, and Wochna Boulevard on STOF property.

6. The CITY agrees to support the STOF's application for abandonment of 40<sup>th</sup> Street with Broward County.

7. Prior to the Coconut Creek Fee to Trust lands going into trust, the CITY agrees to timely respond to all permitting requests by the STOF for the PMDD and related Site Plans within applicable Florida Statutes and CITY ordinances.

8. The CITY agrees that payments received from the STOF under the terms of this Agreement will be used for improvements within the MainStreet Regional Activity Center and any other expenses or improvements to mitigate the impacts of the lands going into Trust to the extent permitted by applicable law.

**C. VALIDITY OF MUNICIPAL SERVICE PROVIDER AGREEMENT BETWEEN  
THE CITY OF COCONUT CREEK AND THE SEMINOLE TRIBE OF FLORIDA**

1. The CITY and STOF hereby recognize an Intergovernmental Agreement (IGA) titled as a Municipal Service Provider Agreement, entered into between the CITY of Coconut Creek and the Seminole Tribe of Florida, dated September 10, 1999, as interlineated on April 19, 2000, and May 11, 2000, and amended on October 12, 2006. The CITY and STOF hereby acknowledge and agree that the IGA known as the Municipal Service Provider Agreement, as interlineated and amended remains in full force and effect between the parties thereto, and is not amended, repealed, replaced, altered, adjusted, modified, superseded, or revised by any term or condition of this Agreement. Notwithstanding the foregoing, upon receipt by the CITY of the first payment of the initial Tribal Annual Contribution under Paragraph A.3. or the onetime payment under Paragraph A.4, the CITY shall release STOF from its obligation to purchase a minimum five acre parcel for the CITY as set forth in Paragraph 3.2. of the Municipal Service Provider Agreement between the parties hereto dated September 10, 1999, as interlineated on April 19, 2000 and May 11, 2000 and as amended on October 12 2006.

**D. MISCELLANEOUS**

1. *Limited Waiver of Sovereign Immunity.*

a. Pursuant to Tribal Council Resolution No. C-154-11 adopted pursuant to Tribal Ordinance C-01-95 a copy of which is attached hereto as Exhibit D, the STOF agrees to a limited waiver of its sovereign immunity as follows:

i) The limited waiver shall be based solely upon a claim by the CITY that the STOF has materially breached its obligations under the terms and conditions of this Agreement.

ii) The limited waiver may only be asserted by the CITY. It shall not be assignable.

iii) The limited waiver shall not be effective unless and until the parties have first exhausted the dispute resolution procedures hereinafter set forth in Paragraph D.1.b.

iv) The limited waiver shall be limited to declaratory and injunctive relief, as well as actual damages that have been incurred through the date of any claim asserted including without limitation any Annual Tribal Contribution owed by STOF to CITY. The limited waiver of sovereign immunity shall not pertain to any claim for punitive damages nor shall it pertain to any claim in excess of those set forth in Florida state law for the state and its agencies and subdivisions.

b. The limited waiver of sovereign immunity hereunder shall be conditioned upon the following procedures designated to encourage dispute resolution. The parties shall attempt to resolve their dispute by negotiating in good faith for a period not to exceed thirty (30) days with each other with a view towards resolving their dispute voluntarily. If the voluntary efforts of the parties at direct negotiations fail, the parties shall then submit the dispute to mediation by a mediator to be approved by both parties. Any individual appearing on the mediator list of both parties shall be deemed acceptable for the purpose of mediation; otherwise, the parties shall negotiate with one another in good faith in an effort to select a mediator with consent to the selection of the mediator not to be unreasonably withheld. Such mediation shall take place within

thirty (30) days after written notice from one party to the other of the failure of voluntary negotiations between the parties. **Under no circumstances will the mediation operate as a waiver of tribal sovereign immunity.**

c. In the event that the STOF is charged with a breach of this Agreement, and all other conditions precedent to the assertion of a claim or the filing of suit have been met in full, the complaint or charging document filed by the CITY shall set forth each and every fact and shall include, by way of attachment, each and every document upon which its allegations of breach are predicated. Each and every allegation contained in the complaint or charging document must be verified under oath. For this purpose, the STOF hereby expressly and unequivocally waives the sovereign immunity of the STOF for the limited purpose of enforcing and/or resolving disputes arising under this Agreement, and as specifically limited and set forth in this Agreement, all in accordance with the provisions set forth in Tribal Council Resolution No. C-154-11 and Ordinance No. C-01-95 enacted by the Tribal Council of the STOF, and consents to the jurisdiction of the United States District Court for the Southern District of Florida and the courts of the Seventeenth Judicial Circuit in and for Broward County, Florida, and the federal and state courts having appellate jurisdiction thereover, (collectively the "Courts") or agrees to ~~non binding~~ arbitration in the event such courts are unable or unwilling to accept jurisdiction with respect to any dispute, enforcement or collection matter arising thereunder, and further waives any requirement for exhaustion of remedies in any court or forum of the STOF. Any such binding arbitration shall be enforced in the Courts. The STOF hereby expressly agrees not to plead in any legal proceeding or use the defense or defenses/affirmative defenses of immunity in any legal proceeding or arbitration



involving the STOF or the CITY, brought by the CITY to enforce the terms and conditions of this Agreement.

d. The law governing this Agreement shall be the applicable laws of the United States of America.

e. Under no circumstances will an award of damages make available to the CITY access to any tribal assets which are not otherwise available as a matter of applicable federal law. Additionally, nothing contained herein shall be read to constitute a pledge of assets or an agreement to allow levy and execution against any specific asset of the Seminole Tribe of Florida in the event that a judgment is rendered against the Seminole Tribe of Florida.

f. Nothing in this Section is intended to expand the STOF's tort liability beyond that set forth in the *Gaming Compact*.

2. **Notices.** All notices or other communications provided for by this Agreement shall be made in writing and shall be deemed properly delivered by the mailing of such notices to the parties entitled thereto, via certified mail, return receipt requested, postage prepaid to the parties at the following addresses (or to such other addresses designated in writing by one party to the other):

Seminole Tribe  
Chairman  
Seminole Tribe of Florida  
6300 Stirling Road  
Hollywood, FL 33024

Coconut Creek  
Mayor  
City of Coconut Creek  
4800 West Copans Road  
Coconut Creek, FL 33063

With copy to:

With copy to:

Casino Manager  
Seminole Casino Coconut Creek  
5550 NW 40th Street  
Coconut Creek, FL 33073

City Manager  
City of Coconut Creek  
4800 West Copans Road  
Coconut Creek, FL 33063

With copy to:

With copy to:

General Counsel  
Seminole Tribe of Florida  
6300 Stirling Road  
Hollywood, FL 33024

City Attorney  
City of Coconut Creek  
4800 West Copans Road  
Coconut Creek, FL 33063

3. ***Waivers.*** A waiver of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other breach of such provision or of any other provisions, nor shall any failure to enforce any provision hereof operate as a waiver of such provision or of any other provisions.

4. ***Negotiations and Drafting.*** This Agreement has been negotiated and drafted by all parties hereto and shall not be more strictly construed against any party because of such party's preparation of this Agreement. All parties to this Agreement have been represented by their respective counsel. The parties hereto acknowledge having read this Agreement and discussed the terms of this Agreement with their respective counsel and that the approval and execution of this Agreement has been made freely and voluntarily with full knowledge of its legal effect. In the event it becomes necessary for any reason to construe this Agreement as permitted by the rules of evidence or the appropriate court, this Agreement will be construed as being jointly prepared and drafted by all parties hereto.

5. ***Survivability and Assignment.*** All of the terms, conditions, provisions, and representations contained in this Agreement shall survive and transcend the execution of this Agreement. The CITY and the STOF, their officers, agents and employees, hereby agree to abide by the terms of this Agreement.

6. ***Incorporation of Whereas clauses.*** The CITY and the STOF agree that the Whereas clauses at the beginning of this Agreement are true and correct, and are hereby incorporated by reference into this Agreement.

7. ***Total Agreement and Amendments.*** The herein Agreement including all Whereas clauses and exhibits referenced therein constitutes and contains the entire Agreement as between the parties. There are no representations, premises or undertakings between the parties other than expressly set forth herein. The parties agree that no amendments or modifications of any of the terms of this Agreement shall be valid unless in writing and executed with the same formalities as this Agreement.

8. ***Execution.*** This Agreement shall be executed in quadruple and each such executed Agreement shall be deemed to be an original.

9. ***Severability.*** Should any part, term or provision of this Agreement, or any document required herein to be executed, be declared invalid, void or unenforceable, by the Secretary of the Interior and a state or federal court of competent jurisdiction, all remaining parts, terms and provisions thereof shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby provided that severing the invalidated part, term or provisions does not undermine the overall intent of the parties in entering this Agreement.

10. ***Final Effective Date of Agreement.***

a. Except as set forth in Paragraph D.11. below, this Agreement shall become effective (the "Final Effective Date") upon the date the Secretary of the Interior approves this Agreement pursuant to 25 USC §81 and its implementing regulations or advises STOF that such approval is not

required, either for reason that the Agreement is not "covered" by § 81 because it does not provide for "encumbrances" as defined by 25 CFR § 84.002 or for any other reasons.

b. The STOF shall undertake reasonable efforts, in consultation with the CITY, to secure said approval or in the absence of said approval, to secure a written determination from the Secretary of the reasons he has determined that said approval is not required. Such reasons may include a determination that the Agreement is not "covered" by §81, as well as a statement that, because of that determination approval under § 81 is not required. In addition, in the event of a determination by the Secretary that § 81 approval of this Agreements is not required, the STOF shall undertake reasonable efforts, in consultation with the CITY, to have included in any written determination from the Secretary a statement that the provisions of § 81 will not affect the validity of the provisions of this Agreement from that time forward, including the time after the land is taken into trust. If the Secretary determines that §81 approval is required, but objects to provisions of this Agreement or disapproves this Agreement, the CITY and STOF will negotiate in good faith to resolve the objections and resubmit this Agreement for approval. In that event, the STOF shall not transfer title to the Coconut Creek Fee to Trust Lands to the United States of America until such time as § 81 approval is obtained.

11. ***Initial Effective Date of Agreement.*** Notwithstanding the provisions of Paragraph 10 above, Paragraphs A.1, A.3, A.4, B.2, B.3, B.4, B.5, B.6, B.7 C.1 and D with the exception of D.10.a of this Agreement shall be effective ("Initial Effective Date") on the date this Agreement is fully executed by both parties. None of the provisions referenced in this Paragraph D.11. constitute an "encumbrance" as defined by 25 CFR § 84.002. Further, the provisions of this Paragraph D.11.

shall constitute an enforceable agreement between the parties hereto separate and apart from this Agreement and shall not be affected in any manner by any disapproval of this Agreement by the Secretary pursuant to 25 U.S.C. § 81 or otherwise.

12. ***Titles to Paragraphs.*** The title of each paragraph in this Agreement is for purposes of clarity and ease of reading only.

13. ***Prevailing Party.*** The non-prevailing party shall be liable to the prevailing party for all costs, expenses, attorneys' fees and damages at the trial and appellate level, up to and including the U.S. Supreme Court, which may be incurred or sustained by the prevailing party by reason of the non-prevailing party's breach of any of the provisions of this Agreement.

14. ***Authorization.*** The STOF and the CITY represent and warrant that each has the full power and authority to execute this Agreement and perform its obligations in accordance with the terms and conditions hereof, and that the representatives executing this Agreement on behalf of each party are duly and fully authorized to so execute and deliver this Agreement.

a. The STOF has authorized its Chairman to execute this Agreement by the adoption of Resolution C-154-11 adopted 1/24/11, a copy of which is attached hereto as Exhibit D. *me*

b. The CITY has authorized its officers to execute this Agreement by the adoption of Resolution No. 2011-09 adopted 1/27/11, a copy of which is attached hereto as Exhibit E. *me*

15. ***Best Efforts.*** The parties agree that they shall devote their best efforts to the fulfillment of their respective duties and obligations hereunder in accordance with the provisions of this Agreement.

16. ***Law to Govern.*** This Agreement shall be governed by the applicable laws of the United States of America and Tribal Ordinance C-01-95.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their authorized representatives and delivered as of the day and year first above written.

**(REMAINDER OF PAGE INTENTIONALLY BLANK)**



**SEMINOLE TRIBE OF FLORIDA:**

BY: Mitchell Cypress  
Mitchell Cypress, as Chairman  
Of the Tribal Council

Date: 2/11/11

Attest: Shirley Ann Saxon  
Secretary

**THE CITY OF COCONUT CREEK, FLORIDA:**

BY: David Rivera  
David Rivera, City Manager

Date: January 27, 2011

Attest: Barbara S. Price  
Barbara S. Price, MMC  
City Clerk

Approved as to legal form:

BY: Nancy A. Cousins  
for Paul S. Stuart, City Attorney

Date: January 27, 2011

**NANCY A. COUSINS**

\\\\pdcl\data\\City Attorney\\NCousins\\Documents\\City Manager\\Seminole Tribe\\Trust Status Negotiations\\Mitigation Agreement 01-20-11 Clean  
Final.doc

**[INSERT APPROPRIATE SECRETARIAL APPROVAL FORM PER 25 USC § 81]**

**PMDD LEGAL DESCRIPTION:**

ALL OF TRACT "C", TRACT "D" AND TRACT "G", COMMERCE CENTER OF COCONUT CREEK, PLAT BOOK 131, PAGE 30, BROWARD COUNTY RECORDS, FLORIDA. CONTAINING 22.409 ACRES MORE OR LESS.

**TOGETHER WITH:**

TRACT "H", COMMERCE CENTER OF COCONUT CREEK, PLAT BOOK 131, PAGE 30, BROWARD COUNTY RECORDS, FLORIDA. LESS FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY, PARCEL 118 AS SHOWN ON FDOT SECTION MAP #86100-2531, DESCRIBED AS FOLLOWS:

**LESS AND EXCEPTING:**

THAT PART OF TRACT "H" COMMERCE CENTER OF COCONUT CREEK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 131, PAGE 30 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, LYING IN SECTION 18, TOWNSHIP 48 SOUTH, RANGE 42 EAST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID TRACT "H"; THENCE RUN SOUTH 00° 50'59" EAST ALONG A NON-VEHICULAR ACCESS LINE AND THE WEST LINE OF SAID TRACT "H", A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING; THENCE NORTH 89°30'20" EAST ALONG A LINE 20.00 FEET SOUTH OF AND PARRALLEL WITH THE NORTH LINE OF SAID TRACT "H", A DISTANCE OF 72.17 FEET; THENCE SOUTH 01°57'54" EAST, A DISTANCE OF 159.66 FEET TO A POINT ON A CURVE CONCAVE WESTERLY, HAVING A CHORD BEARING OF SOUTH 09°51'32" WEST; THENCE SOUTHWESTERLY ALONG SAID CURVE, HAVING A RADIUS OF 136.00 FEET, THROUGH A CENTRAL ANGLE OF 23°38'52", AN ARC DISTANCE OF 56.13 FEET TO THE END OF SAID CURVE; THENCE SOUTH 21°40'58" WEST, A DISTANCE OF 130.76 FEET TO A POINT ON A CURVE CONCAVE EASTERLY, HAVING A CHORD BEARING OF SOUTH 09°39'02" WEST; THENCE SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 128.00 FEET, THROUGH A CENTRAL ANGLE OF 24°03'53", AN ARC DISTANCE OF 53.76 FEET TO THE END OF SAID CURVE; THENCE SOUTH 02°22'55" EAST, A DISTANCE OF 183.48 FEET TO A POINT ON A CURVE CONCAVE NORTHEASTERLY, HAVING A CHORD BEARING OF SOUTH 19°32'41" EAST; THENCE SOUTHERLY AND EASTERLY ALONG SAID CURVE, HAVING A RADIUS OF 60.00 FEET, THROUGH A CENTRAL ANGLE OF 34°19'32", AN ARC DISTANCE OF 35.94 FEET TO THE END OF SAID CURVE; AND A POINT ON SAID NON-VEHICULAR ACCESS LINE; THENCE NORTH 47°10'36" WEST ALONG SAID NON-VEHICULAR ACCESS LINE, A DISTANCE OF 19.59 FEET TO A POINT ON THE WEST LINE OF SAID TRACT "H" AND THE BEGINNING OF A CURVE CONCAVE EASTERLY, HAVING A CHORD BEARING OF NORTH 02°28'39" WEST; THENCE NORTHERLY ALONG SAID NON-VEHICULAR ACCESS LINE AND SAID WEST LINE OF TRACT "H", HAVING A RADIUS OF 4228.28 FEET, THROUGH A CENTRAL ANGLE OF 02°57'20", AN

ARC DISTANCE OF 218.11 FEET TO THE END OF SAID CURVE; THENCE NORTH 00°59'59" WEST ALONG SAID NON-VEHICULAR ACCESS LINE AND SAID WEST LINE OF TRACT "H", A DISTANCE OF 373.51 FEET TO THE POINT OF BEGINNING. CONTAINING 0.500 ACRE, MORE OR LESS.

SAID LANDS CONTAINING A NET ACREAGE OF 13.245 ACRES, MORE OR LESS.

TOGETHER WITH:

THE EAST HALF (E1/2) OF THE NORTH 122.00 FEET OF TRACT 66, BLOCK 89, "PALM BEACH FARMS COMPANY PLAT No. 3", PLAT BOOK 2, PAGES 45-54, PALM BEACH COUNTY RECORDS, FLORIDA. CONTAINING 0.896 ACRES MORE OR LESS.

TOGETHER WITH:

A PORTION OF TRACT "B", COMMERCE CENTER OF COCONUT CREEK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 131, PAGE 30 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEASTERLY CORNER OF SAID TRACT "B"; THENCE RUN SOUTH 89°37'19" WEST ALONG THE NORTHERLY LINE OF SAID TRACT "B" FOR 926.36 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE SOUTH 00°25'15" EAST FOR 406.28 FEET; THENCE SOUTH 89°34'45" WEST FOR 41.00 FEET; THENCE SOUTH 00°25'15" EAST, FOR 316.57 FEET; THENCE SOUTH 89°28'23" EAST FOR 133.45 FEET TO A POINT OF CURVATURE; THENCE NORTHEASTERLY ALONG A CIRCULAR CURVE TO THE LEFT HAVING A RADIUS OF 342.00 FEET AND A CENTRAL ANGLE OF 24°37'19" FOR AN ARC DISTANCE OF 146.97 FEET TO A POINT OF REVERSE CURVATURE; THENCE NORTHEASTERLY ALONG A CIRCULAR CURVE TO THE RIGHT HAVING A RADIUS OF 354.00 FEET AND A CENTRAL ANGLE OF 2°54'07" FOR AN ARC OF DISTANCE OF 17.93 FEET; THENCE SOUTH 00°25'15" EAST FOR 131.88 FEET TO A POINT ON THE SOUTHERLY LINE OF SAID TRACT "B"; THENCE NORTH 89°28'23" WEST, ALONG A LINE THAT IS 60.00 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SECTION 18, TOWNSHIP 48 SOUTH, RANGE 42 EAST, FOR 68.46 FEET; THENCE NORTH 85°39'32" WEST FOR 180.40 FEET; THENCE NORTH 89°28'23" WEST, FOR 313.77 FEET; THENCE NORTH 00°31'37" EAST, FOR 90.37 FEET, TO A POINT ON THE NEXT DESCRIBED CURVE, SAID POINT BEARS SOUTH 35°30'35" WEST, FROM THE RADIUS POINT OF SAID CURVE; THENCE NORTHWESTERLY, NORTHERLY AND NORTHEASTERLY, ALONG A CIRCULAR CURVE TO THE RIGHT, HAVING A RADIUS OF 235.00 FEET AND A CENTRAL ANGLE OF 53°28'56" FOR AN ARC DISTANCE OF 219.36 FEET TO A POINT OF TANGENCY; THENCE NORTH 01°00'29" WEST, FOR 205.01 FEET TO A POINT OF CURVATURE; THENCE NORTHWESTERLY, ALONG A CIRCULAR CURVE TO THE LEFT, HAVING A

RADIUS OF 4,402.28 FEET AND A CENTRAL ANGLE OF 04°08'02" FOR AN ARC DISTANCE OF 317.62 FEET (THE LAST SEVEN COURSES BEING COINCIDENT WITH PORTIONS OF THE SOUTHERLY AND THE WESTERLY LINES OF SAID TRACT "B"); THENCE NORTH 89°37'19" EAST, PARALLEL TO THE NORTHERLY LINE OF SAID TRACT "B", FOR 422.34 FEET TO THE POINT OF BEGINNING. CONTAINING 7.466 ACRES MORE OR LESS.

TOGETHER WITH:

A PORTION OF NORTHWEST 40<sup>TH</sup> STREET, ACCORDING TO THE PLAT OF COMMERCE CENTER OF COCONUT CREEK, AS RECORDED IN PLAT BOOK 131, PAGE 30, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF TRACT "H" AND THE NORTH LINE OF NORTHWEST 40<sup>TH</sup> STREET, ACCORDING TO THE PLAT OF COMMERCE CENTER OF COCONUT CREEK AS RECORDED IN PLAT BOOK 131, PAGE 30, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA; THENCE ALONG THE SOUTH BOUNDARY OF SAID TRACT "H" AND "G" AND THE NORTH LINE OF SAID NORTHWEST 40<sup>TH</sup> STREET FOR THE FOLLOWING FOUR (4) COURSES: NORTH 89°37'15" EAST, A DISTANCE OF 260.70 FEET; THENCE NORTH 00°50'43" WEST, A DISTANCE OF 15.00 FEET; THENCE NORTH 89°37'15" EAST, A DISTANCE OF 1123.56 FEET; THENCE NORTH 44°36'00" EAST, A DISTANCE OF 42.44 FEET;

THENCE LEAVING SAID SOUTH LINE OF TRACT "G", PROCEED SOUTH 05°43'28" EAST, A DISTANCE OF 132.58 FEET TO THE NORTHEASTERLY CORNER OF TRACT "D" OF SAID PLAT OF COMMERCE CENTER OF COCONUT CREEK AND THE SOUTH RIGHT OF WAY LINE OF NORTHWEST 40<sup>TH</sup> STREET; THENCE CONTINUE ALONG THE NORTH BOUNDARY OF SAID TRACT "D", TRACT "C", AND THE SOUTH RIGHT OF WAY LINE OF NORTHWEST 40<sup>TH</sup> STREET FOR THE FOLLOWING SIX COURSES: THENCE NORTH 45°24'00" WEST, A DISTANCE OF 42.41 FEET; THENCE SOUTH 89°37'15" WEST, A DISTANCE OF 150.00 FEET; THENCE NORTH 83°32'11" WEST, A DISTANCE OF 100.72 FEET; THENCE SOUTH 89°37'15" WEST, A DISTANCE OF 234.89 FEET; THENCE NORTH 00°25'15" WEST, A DISTANCE OF 15.00 FEET; THENCE SOUTH 89°37'15" WEST, A DISTANCE OF 908.99 FEET TO THE EAST LINE OF STATE ROAD NO. 7 (U.S. 441) AND A POINT ON THE ARC OF A NON-TANGENT CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 4228.28 FEET, A CENTRAL ANGLE OF 00°24'29" AND A CHORD BEARING OF NORTH 05°18'41" WEST; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 30.12 FEET TO THE POINT OF BEGINNING.

SAID LANDS CONTAINING 1.634 ACRES MORE OR LESS.

SAID LANDS LYING IN THE CITY OF COCONUT CREEK, BROWARD COUNTY, FLORIDA, CONTAINING A TOTAL OF 45.650 ACRES, MORE OR LESS.

**FEE TO TRUST LANDS LEGAL DESCRIPTION:**

ALL OF TRACT "C", TRACT "D" AND TRACT "G", COMMERCE CENTER OF COCONUT CREEK, PLAT BOOK 131, PAGE 30, BROWARD COUNTY RECORDS, FLORIDA. CONTAINING 22.409 ACRES MORE OR LESS.

**TOGETHER WITH:**

TRACT "H", COMMERCE CENTER OF COCONUT CREEK, PLAT BOOK 131, PAGE 30, BROWARD COUNTY RECORDS, FLORIDA. LESS FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY, PARCEL 118 AS SHOWN ON FDOT SECTION MAP #86100-2531, DESCRIBED AS FOLLOWS:

**LESS AND EXCEPTING:**

THAT PART OF TRACT "H" COMMERCE CENTER OF COCONUT CREEK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 131, PAGE 30 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, LYING IN SECTION 18, TOWNSHIP 48 SOUTH, RANGE 42 EAST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID TRACT "H"; THENCE RUN SOUTH 00° 50'59" EAST ALONG A NON-VEHICULAR ACCESS LINE AND THE WEST LINE OF SAID TRACT "H", A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING; THENCE NORTH 89°30'20" EAST ALONG A LINE 20.00 FEET SOUTH OF AND PARRALLEL WITH THE NORTH LINE OF SAID TRACT "H", A DISTANCE OF 72.17 FEET; THENCE SOUTH 01°57'54" EAST, A DISTANCE OF 159.66 FEET TO A POINT ON A CURVE CONCAVE WESTERLY, HAVING A CHORD BEARING OF SOUTH 09°51'32" WEST; THENCE SOUTHWESTERLY ALONG SAID CURVE, HAVING A RADIUS OF 136.00 FEET, THROUGH A CENTRAL ANGLE OF 23°38'52", AN ARC DISTANCE OF 56.13 FEET TO THE END OF SAID CURVE; THENCE SOUTH 21°40'58" WEST, A DISTANCE OF 130.76 FEET TO A POINT ON A CURVE CONCAVE EASTERLY, HAVING A CHORD BEARING OF SOUTH 09°39'02" WEST; THENCE SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 128.00 FEET, THROUGH A CENTRAL ANGLE OF 24°03'53", AN ARC DISTANCE OF 53.76 FEET TO THE END OF SAID CURVE; THENCE SOUTH 02°22'55" EAST, A DISTANCE OF 183.48 FEET TO A POINT ON A CURVE CONCAVE NORTHEASTERLY, HAVING A CHORD BEARING OF SOUTH 19°32'41" EAST; THENCE SOUTHERLY AND EASTERLY ALONG SAID CURVE, HAVING A RADIUS OF 60.00 FEET, THROUGH A CENTRAL ANGLE OF 34°19'32", AN ARC DISTANCE OF 35.94 FEET TO THE END OF SAID CURVE; AND A POINT ON SAID NON-VEHICULAR ACCESS LINE; THENCE NORTH 47°10'36" WEST ALONG SAID NON-VEHICULAR ACCESS LINE, A DISTANCE OF 19.59 FEET TO A POINT ON THE WEST LINE OF SAID TRACT "H" AND THE BEGINNING OF A CURVE CONCAVE EASTERLY, HAVING A CHORD BEARING OF NORTH 02°28'39" WEST; THENCE NORTHERLY ALONG SAID NON-VEHICULAR ACCESS LINE AND SAID WEST LINE OF TRACT "H", HAVING A RADIUS OF 4228.28 FEET, THROUGH A CENTRAL ANGLE OF 02°57'20", AN



ARC DISTANCE OF 218.11 FEET TO THE END OF SAID CURVE; THENCE NORTH 00°59'59" WEST ALONG SAID NON-VEHICULAR ACCESS LINE AND SAID WEST LINE OF TRACT "H", A DISTANCE OF 373.51 FEET TO THE POINT OF BEGINNING. CONTAINING 0.500 ACRE, MORE OR LESS.

SAID LANDS CONTAINING A NET ACREAGE OF 13.245 ACRES, MORE OR LESS.

TOGETHER WITH:

THE EAST HALF (E1/2) OF THE NORTH 122.00 FEET OF TRACT 66, BLOCK 89, "PALM BEACH FARMS COMPANY PLAT No. 3", PLAT BOOK 2, PAGES 45-54, PALM BEACH COUNTY RECORDS, FLORIDA. CONTAINING 0.896 ACRES MORE OR LESS.

TOGETHER WITH:

A PORTION OF TRACT "B", COMMERCE CENTER OF COCONUT CREEK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 131, PAGE 30 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEASTERLY CORNER OF SAID TRACT "B"; THENCE RUN SOUTH 89°37'19" WEST ALONG THE NORTHERLY LINE OF SAID TRACT "B" FOR 926.36 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE SOUTH 00°25'15" EAST FOR 406.28 FEET; THENCE SOUTH 89°34'45" WEST FOR 41.00 FEET; THENCE SOUTH 00°25'15" EAST, FOR 316.57 FEET; THENCE SOUTH 89°28'23" EAST FOR 133.45 FEET TO A POINT OF CURVATURE; THENCE NORTHEASTERLY ALONG A CIRCULAR CURVE TO THE LEFT HAVING A RADIUS OF 342.00 FEET AND A CENTRAL ANGLE OF 24°37'19" FOR AN ARC DISTANCE OF 146.97 FEET TO A POINT OF REVERSE CURVATURE; THENCE NORTHEASTERLY ALONG A CIRCULAR CURVE TO THE RIGHT HAVING A RADIUS OF 354.00 FEET AND A CENTRAL ANGLE OF 2°54'07" FOR AN ARC OF DISTANCE OF 17.93 FEET; THENCE SOUTH 00°25'15" EAST FOR 131.88 FEET TO A POINT ON THE SOUTHERLY LINE OF SAID TRACT "B"; THENCE NORTH 89°28'23" WEST, ALONG A LINE THAT IS 60.00 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SECTION 18, TOWNSHIP 48 SOUTH, RANGE 42 EAST, FOR 68.46 FEET; THENCE NORTH 85°39'32" WEST FOR 180.40 FEET; THENCE NORTH 89°28'23" WEST, FOR 313.77 FEET; THENCE NORTH 00°31'37" EAST, FOR 90.37 FEET, TO A POINT ON THE NEXT DESCRIBED CURVE, SAID POINT BEARS SOUTH 35°30'35" WEST, FROM THE RADIUS POINT OF SAID CURVE; THENCE NORTHWESTERLY, NORTHERLY AND NORTHEASTERLY, ALONG A CIRCULAR CURVE TO THE RIGHT, HAVING A RADIUS OF 235.00 FEET AND A CENTRAL ANGLE OF 53°28'56" FOR AN ARC DISTANCE OF 219.36 FEET TO A POINT OF TANGENCY; THENCE NORTH 01°00'29" WEST, FOR 205.01 FEET TO A POINT OF CURVATURE; THENCE NORTHWESTERLY, ALONG A CIRCULAR CURVE TO THE LEFT, HAVING A

RADIUS OF 4,402.28 FEET AND A CENTRAL ANGLE OF 04°08'02" FOR AN ARC DISTANCE OF 317.62 FEET (THE LAST SEVEN COURSES BEING COINCIDENT WITH PORTIONS OF THE SOUTHERLY AND THE WESTERLY LINES OF SAID TRACT "B"); THENCE NORTH 89°37'19" EAST, PARALLEL TO THE NORTHERLY LINE OF SAID TRACT "B", FOR 422.34 FEET TO THE POINT OF BEGINNING. CONTAINING 7.466 ACRES MORE OR LESS.

TOGETHER WITH:

A PORTION OF NORTHWEST 40<sup>TH</sup> STREET, ACCORDING TO THE PLAT OF COMMERCE CENTER OF COCONUT CREEK, AS RECORDED IN PLAT BOOK 131, PAGE 30, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF TRACT "H" AND THE NORTH LINE OF NORTHWEST 40<sup>TH</sup> STREET, ACCORDING TO THE PLAT OF COMMERCE CENTER OF COCONUT CREEK AS RECORDED IN PLAT BOOK 131, PAGE 30, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA; THENCE ALONG THE SOUTH BOUNDARY OF SAID TRACT "H" AND "G" AND THE NORTH LINE OF SAID NORTHWEST 40<sup>TH</sup> STREET FOR THE FOLLOWING FOUR (4) COURSES: NORTH 89°37'15" EAST, A DISTANCE OF 260.70 FEET; THENCE NORTH 00°50'43" WEST, A DISTANCE OF 15.00 FEET; THENCE NORTH 89°37'15" EAST, A DISTANCE OF 1123.56 FEET; THENCE NORTH 44°36'00" EAST, A DISTANCE OF 42.44 FEET;

THENCE LEAVING SAID SOUTH LINE OF TRACT "G", PROCEED SOUTH 05°43'28" EAST, A DISTANCE OF 132.58 FEET TO THE NORTHEASTERLY CORNER OF TRACT "D" OF SAID PLAT OF COMMERCE CENTER OF COCONUT CREEK AND THE SOUTH RIGHT OF WAY LINE OF NORTHWEST 40<sup>TH</sup> STREET; THENCE CONTINUE ALONG THE NORTH BOUNDARY OF SAID TRACT "D", TRACT "C", AND THE SOUTH RIGHT OF WAY LINE OF NORTHWEST 40<sup>TH</sup> STREET FOR THE FOLLOWING SIX COURSES: THENCE NORTH 45°24'00" WEST, A DISTANCE OF 42.41 FEET; THENCE SOUTH 89°37'15" WEST, A DISTANCE OF 150.00 FEET; THENCE NORTH 83°32'11" WEST, A DISTANCE OF 100.72 FEET; THENCE SOUTH 89°37'15" WEST, A DISTANCE OF 234.89 FEET; THENCE NORTH 00°25'15" WEST, A DISTANCE OF 15.00 FEET; THENCE SOUTH 89°37'15" WEST, A DISTANCE OF 908.99 FEET TO THE EAST LINE OF STATE ROAD NO. 7 (U.S. 441) AND A POINT ON THE ARC OF A NON-TANGENT CURVE CONCAVE TO THE EAST HAVING A RADIUS OF 4228.28 FEET, A CENTRAL ANGLE OF 00°24'29" AND A CHORD BEARING OF NORTH 05°18'41" WEST; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 30.12 FEET TO THE POINT OF BEGINNING.

SAID LANDS CONTAINING 1.634 ACRES MORE OR LESS.

SAID LANDS LYING IN THE CITY OF COCONUT CREEK, BROWARD COUNTY, FLORIDA, CONTAINING A TOTAL OF 45.650 ACRES, MORE OR LESS.

## EXHIBIT "C"

### CALCULATION OF CONSUMER PRICE INDEX Based on Bureau of Labor Statistics Data

#### Consumer Price Index – All Urban Consumers

Not Seasonally Adjusted

Miami-Fort Lauderdale, FL Area  
Base Period 1982 – 1984 = 100

A)        \*        Index \_\_\_\_\_ - \_\_\_\_\_

B)        \*        Index \_\_\_\_\_ - \_\_\_\_\_

C)        Change in Index        \_\_\_\_\_

Percent Change (rounded to one decimal)

C        ÷        B        =        % change

D)        \_\_\_\_\_ ÷ \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_ % or \_\_\_\_\_

A    =    The CPI – All Urban Consumers for ( \* ) This Year \_\_\_\_\_

B    =    The CPI – All Urban Consumers for ( \* ) Last Year \_\_\_\_\_

C    =    Subtract B from A which equals the change in the Raw Index.

D    =     $C \div B \times 100$  = the percentage change for the one year period.

(X)    =    the payment for the prior year

(Y)    =    the decimal equivalent of "D"

(Z)    =    current payment

(\*)    =    Month first payment made under A.3.b.

RE: COCONUT CREEK FEE TO TRUST LANDS MITIGATION AGREEMENT; WAIVER OF SOVEREIGN IMMUNITY

SEMINOLE TRIBE OF FLORIDA  
HOLLYWOOD, FLORIDA

RESOLUTION NO. C-154-11

- WHEREAS, the Seminole Tribe of Florida is an organized Indian Tribe as defined in Section 16 of the Act of June 18, 1934, as amended; and
- WHEREAS, the Tribal Council of the Seminole Tribe of Florida is the governing body of the Seminole Tribe of Florida; and
- WHEREAS, the Seminole Tribe of Florida ("Tribe") and the City of Coconut Creek, Florida ("City") have negotiated a proposed Coconut Creek Fee To Trust Lands Mitigation Agreement ("Agreement") to address issues related to the Tribe's application to the U.S. Department of the Interior, Bureau of Indian Affairs ("BIA") to take the Coconut Creek Fee to Trust Lands identified in the Agreement into trust for the use and benefit of the Tribe; and
- WHEREAS, the Tribe has filed an application for a Planned MainStreet Development District ("PMDD") with the City, setting forth future development plans for the properties within the City that are owned or controlled by the Tribe as described in the Agreement, which the City is scheduled to consider for approval on January 27, 2011 ("Coconut Creek Lands"); and
- WHEREAS, as part of the PMDD application, the Tribe has proposed various improvements designed to ameliorate the impacts of its proposed development plans for the Coconut Creek Fee to Trust Lands on the City; and
- WHEREAS, the City has objected to the Tribe's application for trust status for the Coconut Creek Fee to Trust Lands; and
- WHEREAS, if the BIA takes the Coconut Creek Fee to Trust Lands into trust for the use and benefit of the Tribe, said lands will no longer be subject to the jurisdiction of the City; and
- WHEREAS, the Tribe desires to assure the City that the Tribe will honor its commitments evidenced in the PMDD, if approved by the City on January 27, 2011 as outlined in the Agreement even if the Coconut Creek Fee to Trust Lands are ultimately taken into trust; and
- WHEREAS, the Tribe will assist the City in defraying the costs and expenses which the City will incur as a result of the Coconut Creek Fee to Trust Lands being taken into trust, and the anticipated impacts of the development to occur thereon by making a payment ("Annual Tribal Contribution") to the City for so long as gaming is conducted on the Tribe's trust lands within the boundaries of the City, pursuant to the terms set forth in the Agreement; and
- WHEREAS, the Agreement requires the Tribe to waive its sovereign immunity for the limited purpose of enforcing the Agreement and/or resolving disputes arising under the Coconut Creek Fee To

**EXHIBIT D**

RE: COCONUT CREEK FEE TO TRUST LANDS MITIGATION AGREEMENT; WAIVER OF SOVEREIGN IMMUNITY

RESOLUTION NO. C-154-11

PAGE TWO

Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida as specifically set forth in the Agreement; and

WHEREAS, among other obligation and commitments, the City will formally withdraw all of its negative comments and objections to the Tribe's trust application and the proposed development plans and execute a letter to the BIA fully supporting the Tribe's trust application and proposed development plans as subject to the terms and conditions of the Agreement; and

WHEREAS, the Tribal Council having reviewed the proposed Coconut Creek Fee to Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida, a copy of which is attached hereto, marked Exhibit "A," and by this reference is incorporated herein and is otherwise fully advised.

NOW THEREFORE BE IT RESOLVED: the Tribal Council of the Seminole Tribe of Florida hereby approves the form of the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida; and

BE IT FURTHER RESOLVED: that the Chairman of the Tribal Council as attested to the Secretary of the Seminole Tribe of Florida is hereby authorized and directed to execute a final version of the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida; and

BE IT FURTHER RESOLVED: that the Tribal Council of the Seminole Tribe hereby expressly and unequivocally waives the sovereign immunity of the Seminole Tribe of Florida for the limited purpose of enforcing and/or resolving disputes arising under the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida, and as specifically limited and set forth in the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida, as authorized by this resolution; all in accordance with the provisions set forth in Ordinance No. C-01-95 enacted by the Tribal Council of the Seminole Tribe, and consents on behalf of the Seminole Tribe of Florida to the jurisdiction of the United States District Court for the Southern District of Florida and the courts of the Seventeenth Judicial Circuit in and for Broward County, Florida, and the federal and state courts having appellate jurisdiction thereover, or agrees to binding arbitration in the event such courts are unable or unwilling to accept jurisdiction (all in accord with the terms and provisions of the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida) with respect to any dispute, enforcement or collection matter arising thereunder, and further waives any requirement for exhaustion of remedies in any court of forum of the Seminole Tribe of Florida; and

BE IT FURTHER RESOLVED: that the General Counsel of the Seminole Tribe of Florida is hereby authorized to make minor, non-substantive changes to the Agreement and may withhold submission of the Agreement pending the resolution of all pending issues between the Tribe and the City regarding same; and

RE: COCONUT CREEK FEE TO TRUST LANDS MITIGATION AGREEMENT; WAIVER OF SOVEREIGN IMMUNITY

RESOLUTION NO. C-154-11

PAGE THREE

BE IT FURTHER RESOLVED: the Tribe shall submit the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida to the Secretary of the Interior for review and approval pursuant to 25 USC §81; and

BE IT FURTHER RESOLVED: the Treasurer of the Tribe is hereby authorized and directed to expend the necessary Tribal funds to satisfy the financial requirements of the Coconut Creek Fee To Trust Lands Mitigation Agreement with the City of Coconut Creek, Florida; and

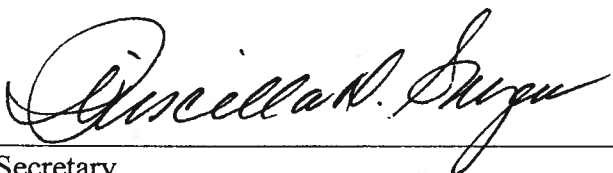
BE IT FURTHER RESOLVED: that this resolution is hereby adopted after motion duly made by Max B. Osceola, Jr., seconded by Andrew J. Bowers, Jr, and a roll call vote as follows:

Chairman Mitchell Cypress.....AYE  
Vice-Chairman Richard Bowers, Jr.....AYE  
Council Representative Manuel Tiger.....AYE  
Council Representative Andrew J. Bowers, Jr.....AYE  
Council Representative Max B. Osceola, Jr.....AYE

DONE THIS THE 24TH DAY OF JANUARY, 2011 at the Special Meeting of the Tribal Council, duly convened at the Immokalee Seminole Indian Reservation, with a quorum being present, by a vote of 5 For, 0 Against, with no Abstentions.

  
\_\_\_\_\_  
Chairman  
TRIBAL COUNCIL

ATTEST:

  
\_\_\_\_\_  
Secretary  
TRIBAL COUNCIL



**RESOLUTION NO. 2011- 09**

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF COCONUT CREEK, FLORIDA, AUTHORIZING THE CITY MANAGER TO EXECUTE THE ATTACHED COCONUT CREEK FEE TO TRUST LANDS MITIGATION AGREEMENT BETWEEN THE CITY AND THE SEMINOLE TRIBE OF FLORIDA (STOF); PROVIDING AN EFFECTIVE DATE**

**WHEREAS,** The Seminole Tribe of Florida ("STOF") has filed an application for a Planned MainStreet Development District (PMDD) detailing future development plans for the properties within the City of Coconut Creek ("City") that are owned or controlled by STOF, including a request for the abandonment of Northwest 40<sup>th</sup> Street, and

**WHEREAS,** STOF has proposed various improvements designed to ameliorate the impacts of the proposed development plans for the Coconut Creek Fee to Trust Lands that impact the City and its residents; and

**WHEREAS,** the City has objected to STOF's application for trust status for the Coconut Creek Fee to Trust Lands, which, if approved by the Bureau of Indian Affairs, would remove said lands from the jurisdiction of the City; and

**WHEREAS,** STOF desires to assure the City that STOF will honor its commitments evidenced in the approved PMDD, as outlined in this Agreement, even if the Coconut Creek Fee to Trust Lands ultimately are taken into trust;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF COCONUT CREEK, FLORIDA:**

**Section 1:** That the City Commission has reviewed and hereby approves the attached Coconut Creek Fee to Trust Lands Mitigation Agreement between the City of Coconut Creek and The Seminole Tribe of Florida.

**Section 2:** That the City Manager is hereby authorized to execute the attached Coconut Creek Fee to Trust Lands Mitigation Agreement between the City of Coconut Creek and The Seminole Tribe of Florida.


**Section 3:** That the effective date of said Coconut Creek Fee to Trust Lands Mitigation Agreement, excluding the provisions of this Agreement relating to Annual Tribal Contribution, One-Time Payment, and the withdrawal of City's objections to Fee to Trust Application, shall be the date of approval by the Secretary of the Interior.

**Section 4:** That the effective date of the provisions of said Coconut Creek Fee to Trust Lands Mitigation Agreement pertaining to Annual Tribal Contribution, One-Time Payment, and withdrawal of City's objections to Fee to Trust Application shall be effective the date said Agreement is fully executed by both parties.

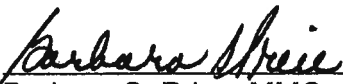
**Section 5:** That this Resolution shall be in full force and effect immediately upon its passage and adoption.

Adopted this 27th day of January, 2011 on a motion by Vice Mayor Sarbone and seconded by Commissioner Gerber.

Ayes	<u>5</u>
Nays	<u>0</u>
Absent or	
Abstaining	<u>0</u>

  
Lisa K. Aronson, Mayor

Attest:

  
Barbara S. Price, MMC  
City Clerk

Aronson	<u>Aye</u>
Sarbone	<u>Aye</u>
Gerber	<u>Aye</u>
Tooley	<u>Aye</u>
Belvedere	<u>Aye</u>

City Clerk/Common/Documents/2011Resolutions

RESOLUTION NO. 2011- 09

A RESOLUTION OF THE CITY COMMISSION OF  
THE CITY OF COCONUT CREEK, FLORIDA,  
AUTHORIZING THE CITY MANAGER TO EXECUTE  
THE ATTACHED COCONUT CREEK FEE TO TRUST  
LANDS MITIGATION AGREEMENT BETWEEN THE  
CITY AND THE SEMINOLE TRIBE OF FLORIDA  
(STOF); PROVIDING AN EFFECTIVE DATE

**WHEREAS,** The Seminole Tribe of Florida ("STOF") has filed an application for a Planned MainStreet Development District (PMDD) detailing future development plans for the properties within the City of Coconut Creek ("City") that are owned or controlled by STOF, including a request for the abandonment of Northwest 40<sup>th</sup> Street, and

**WHEREAS,** STOF has proposed various improvements designed to ameliorate the impacts of the proposed development plans for the Coconut Creek Fee to Trust Lands that impact the City and its residents; and

**WHEREAS,** the City has objected to STOF's application for trust status for the Coconut Creek Fee to Trust Lands, which, if approved by the Bureau of Indian Affairs, would remove said lands from the jurisdiction of the City; and

**WHEREAS,** STOF desires to assure the City that STOF will honor its commitments evidenced in the approved PMDD, as outlined in this Agreement, even if the Coconut Creek Fee to Trust Lands ultimately are taken into trust;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION  
OF THE CITY OF COCONUT CREEK, FLORIDA:**

State of Florida  
County of Broward  
City of Coconut Creek  
I HEREBY CERTIFY that this is a true and correct copy  
of Resolution No. 2011-09  
Witness my hand the Official Seal of  
The City of Coconut Creek this 2nd day of  
February 2011  
Barbara S. Price  
City Clerk

**Section 1:** That the City Commission has reviewed and hereby approves the attached Coconut Creek Fee to Trust Lands Mitigation Agreement between the City of Coconut Creek and The Seminole Tribe of Florida.

**Section 2:** That the City Manager is hereby authorized to execute the attached Coconut Creek Fee to Trust Lands Mitigation Agreement between the City of Coconut Creek and The Seminole Tribe of Florida.


**Section 3:** That the effective date of said Coconut Creek Fee to Trust Lands Mitigation Agreement, excluding the provisions of this Agreement relating to Annual Tribal Contribution, One-Time Payment, and the withdrawal of City's objections to Fee to Trust Application, shall be the date of approval by the Secretary of the Interior.

**Section 4:** That the effective date of the provisions of said Coconut Creek Fee to Trust Lands Mitigation Agreement pertaining to Annual Tribal Contribution, One-Time Payment, and withdrawal of City's objections to Fee to Trust Application shall be effective the date said Agreement is fully executed by both parties.

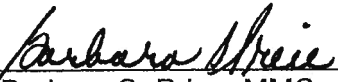
**Section 5:** That this Resolution shall be in full force and effect immediately upon its passage and adoption.

Adopted this 27th day of January, 2011 on a motion by Vice Mayor Sarbone and seconded by Commissioner Gerber.

Ayes	<u>5</u>
Nays	<u>0</u>
Absent or	
Abstaining	<u>0</u>

  
Lisa K. Aronson, Mayor

Attest:

  
Barbara S. Price, MMC  
City Clerk

Aronson	<u>Aye</u>
Sarbone	<u>Aye</u>
Gerber	<u>Aye</u>
Tooley	<u>Aye</u>
Belvedere	<u>Aye</u>

City Clerk/Common/Documents/2011Resolutions





**RECEIVED**

**MAR 30 2011**

**DAVID J. RIVERA**  
CITY MANAGER  
**MARY C. BLASI**  
DEPUTY CITY MANAGER

March 28, 2011

Mr. Franklin Keel  
Director, Eastern Region  
United States Department of the Interior  
Bureau of Indian Affairs  
Eastern Regional Office  
545 Marriott Drive, Suite 700  
Nashville, TN 37214

Subject: Seminole Tribe of Florida Trust Application

Dear Mr. Keel,

I am writing on behalf of the City of Coconut Creek ("City"), in regards to the Seminole Tribe of Florida's ("STOF") pending application to have certain lands adjacent to its present trust lands in Coconut Creek taken into federal trust. The City previously submitted letters raising several issues with regard to the STOF's Trust Application. Additionally, City staff and other City representatives appeared at the September 15, 2010, Environmental Impact Statement Scoping Public Hearing and reiterated many of those same concerns.

After lengthy negotiations, as of this date, with the execution of the enclosed Mitigation Agreement and City Commission and Tribal Resolutions, the City and the STOF have come to agreement on all of the City's concerns. The Agreement will become fully effective upon BIA's approval of its terms or issuance of a written determination that such approval is not required in accordance with 25 U.S.C. § 81 and 25 C.F.R. Part 84. On that basis, the City is hereby formally withdrawing all of its negative comments and objections, whether oral or written, to the STOF Trust Application. Further, the City fully supports the STOF's Trust Application in light of our negotiated Mitigation Agreement. The City looks forward to continuing in its role as a cooperating agency in the preparation of an EIS on the STOF's pending application.

We are available to discuss this further with if you have any questions.

Sincerely,



DAVID J. RIVERA  
City Manager

cc: City Commission  
Paul Stuart, City Attorney  
Mitchell Cypress, Chairman, STOF  
✓ Steve Walker, Esquire

**RESOLUTION NO. 2011-44**

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF COCONUT CREEK, FLORIDA, FORMALLY WITHDRAWING ALL NEGATIVE COMMENTS AND OBJECTIONS TO THE SEMINOLE TRIBE OF FLORIDA'S TRUST APPLICATION PENDING BEFORE THE UNITED STATES SECRETARY OF THE INTERIOR; HEREBY SUPPORTING SAID TRUST APPLICATION; PROVIDING AN EFFECTIVE DATE**

**WHEREAS**, the Seminole Tribe of Florida has a pending Fee to Trust Application for land adjacent to its current trust land in the City of Coconut Creek before the United States Secretary of the Interior; and

**WHEREAS**, the City of Coconut Creek, and the Seminole Tribe of Florida have negotiated and executed a Mitigation Agreement which addresses the concerns of the City regarding the impact of the United States taking the lands into Trust and the proposed Seminole development plan, certain provisions of which are subject to the ultimate approval by the Secretary or a written determination that such approval is not required; and

**WHEREAS**, the City of Coconut Creek is a cooperating agency in the preparation of the EIS on the pending Application.

**WHEREAS**, the City of Coconut Creek, Florida has no further objections to the Seminole Tribe of Florida pending Trust Application, and formally wishes to withdraw any objections now on the record, both in writing and orally; and

**WHEREAS**, the pending Trust Application of the Seminole Tribe of Florida now has the support of the City Commission of the City of Coconut Creek, Florida; and

State of Florida  
County of Broward  
City of Coconut Creek  
I HEREBY CERTIFY that this is a true and correct copy  
of Resolution No. 2011-44  
Witness my hand the Official Seal of  
The City of Coconut Creek this 29th day of  
March 2011  
Barbara J. Price  
City Clerk

**WHEREAS**, the City Commission of the City of Coconut Creek, Florida has, upon review of the Mitigation Agreement, determined that withdrawing any of its objections to the Trust Application and supporting the Trust Application is in the best interests of the citizens of the City;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF COCONUT CREEK, FLORIDA:**

**Section 1:** That the City Commission of the City of Coconut Creek, Florida hereby formally withdraws any and all negative comments and objections, written or oral, to the Seminole Tribe of Florida's pending Trust Application.

**Section 2:** That the City of Coconut Creek hereby fully supports the Seminole Tribe of Florida's pending Trust Application.

**Section 3:** That the City Commission of the City of Coconut Creek, Florida, authorizes a copy of this Resolution to be furnished to the Secretary of the Interior, and to all other interested parties.

**Section 4:** That, in accordance with Paragraphs D.10 and D.11 of the Mitigation Agreement, this Resolution is contingent upon final approval by the Secretary of the Interior or a written determination that such approval is not required.

**Section 5:** That this Resolution shall be in full force and effect immediately upon its passage and adoption.

Adopted this 24th day of March, 2011 on a motion by Commissioner Tooley and seconded by Commissioner Gerber.

Ayes 5


Nays 0

Absent or

Abstaining 0

  
\_\_\_\_\_  
Lou Sarbone, Mayor

Attest:

  
\_\_\_\_\_  
Barbara S. Price, MMC  
City Clerk

Sarbone Aye

Belvedere Aye

Gerber Aye

Tooley Aye

Aronson Aye



## **APPENDIX B**

### **Broward County Guidelines for Determining Ability to Provide Potable Water and Sanitary Sewer Service**







Department of Public Works & Transportation • Water & Wastewater Services

**WATER & WASTEWATER ENGINEERING DIVISION**

2555 West Copans Road • Pompano Beach, Florida 33369 • 954-831-0745 • FAX 954-831-0798/0925

## **GUIDELINES FOR DETERMINING ABILITY TO PROVIDE POTABLE WATER AND SANITARY SEWER SERVICE**

**Date Issued: January 18, 2007**

Date Previously Issued: April, 2003

Date First Issued: July, 2001

Broward County's Water and Wastewater Services (WWS) must determine its ability to provide the appropriate level of service to potential potable water and/or sanitary sewer customers. Tables 1 and 2 contain potable water and sanitary sewer level of service standards, respectively.

**Table 1 - Potable Water Level Of Service Standards**

Facility	Level Of Service Standard
Raw Water Supply and Treatment Plant	Maximum Day
Distribution System	The most stringent of: (1) Peak Hour at 45 psi residual pressure, or (2) Maximum Day Plus Fire Flow at 25 psi residual pressure.

**Table 2 - Sanitary Sewer Level Of Service Standards**

Facility	Level Of Service Standard
Treatment Plant and Effluent Disposal	Average Day
Collection System	Peak Hour

Often, the demand from a potential customer is so small that an engineering analysis is not necessary to determine if WWS can provide the appropriate level of service. For example, an engineering analysis would not be necessary to connect one single family residence or a fire hydrant to the system. Other times, either because of the amount of demand, or the location in the system, an engineering analysis is necessary.

WWS reserves the right to perform an engineering analysis when it deems the analysis necessary. The analysis will follow the guidelines contained herein.

These Guidelines are based on a combination of information from the 2002 WWS Retail Master Plan, a 1995 customer usage study conducted by WWS and flow projections to the year 2025, completed in March, 2003 and based upon the 2000 census and resulting population projections.

WWS' commitment to provide service to new customers occurs when the potential customer pays certain fees and charges.

No guideline can cover all varying circumstances, so WWS reserves the right to act in the best interest of its existing customers.

## **POTABLE WATER**

Determining WWS' ability to serve a potential potable water customer starts with calculating average day demand for the potential customer.

### **Average Day Demand**

Table 3 will be used to calculate average day demand, in gallons per day (gpd).

Table 3 - Potable Water Average Day Demands

Type of Use	Unit	Demand (gpd/unit)
Bar, Cocktail Lounge	1000 SF of gross building area	346
Condominium, Apartment	each	225
Day Child Care	1000 SF of gross building area	177

Type of Use	Unit	Demand (gpd/unit)
Fast Food Service	1000 SF of gross building area	967
Gas Station (fueling only)	fuel pump	154
Hotel (with restaurant and/ or meeting rooms)	rental room	243
Hotel (without restaurant and/ or meeting rooms)	rental room	71
Laundry and/ or Dry Cleaning (staff operated machines)	1000 SF of gross building area	776
Laundry and/ or Dry Cleaning (coin operated machines)	1000 SF of gross building area	2425
Merchandising	1000 SF of gross building area	154
Mobile Home	lot	157
Movie Theater	seat	3
Office	1000 SF of gross building area	178
Place of Worship	1000 SF of gross building area	146
Restaurant	1000 SF of gross building area	699
School	student	12
Self Service Storage	1000 SF of gross building area	19
Single Family Residential	each	280
Vehicular Repair	1000 SF of gross building area	132
Warehouse (mixed use)	1000 SF of gross building area	103
Warehouse (homogeneous, bulk storage)	1000 SF of gross building area	50

Source: 1995 Usage Study of WWS customers,  
Retail Master Plan (1995 usage) and  
2003 Flow Projections of Year 2025 Demands Based on 2000 Census.

Normal landscape irrigation requirements are included.

WWS reserves the right to develop similar values for other specific types of use not listed above.

## Raw Water Supply and Water Treatment Plant

The potable water average day demand calculated above is multiplied by a factor from Table 4 to determine maximum day demand, the level of service condition for raw water supply and water treatment plants. WWS operates four independent water systems, called

Districts, and each District has its own factor.

Table 4 - Potable Water Maximum Day Factors

Factor	District 1	District 2	District 3A	District 3BC
Maximum Day To Average Demand Factor	1.33	1.37	***	***

Source: Analysis of plant flow from 1997 thru 2003

Normal landscape irrigation requirements are included in these maximum day factors.

\*\*\* Raw water supply and water treatment plant supplied by the City of Hollywood.

Any analysis of available capacity must include prior commitments to serve permitted but not yet constructed developments, as well as existing customer flow. Therefore, the sum of existing customer maximum day flow, prior commitments and potential customer maximum day flow is compared to the facility's permitted capacity.

Example:	Existing customer average day flow	= 4,000,000 gpd
	Prior commitments average day flow	= 1,000,000 gpd
	Potential customer average day flow	= <u>500,000 gpd</u>
	Total average day flow	= 5,500,000 gpd
	Times maximum day factor of 1.36	= 7,480,000 gpd
	Facility permitted capacity	= 8,000,000 gpd

Existing customer flow plus prior commitments plus potential customer maximum day demand equals 7,480,000 gpd, which is less than the facility's permitted capacity of 8,000,000 gpd. Therefore, WWS can provide the appropriate raw water supply and water treatment plant level of service to this potential customer.

## Water Distribution System

Detailed analysis of the distribution system may be done by WWS when WWS reviews detailed engineering issues with the developer as part of WWS' developer coordination process. Distribution system issues are not considered in WWS' earlier reviews, since the nature of the distribution system changes over time as improvements are made. A potential customer must make whatever distribution system improvements are necessary to provide the required level of service in order to proceed with their project.

Before the distribution system analysis can begin, the development plan must be detailed enough to be able to use Table 3 – Potable Water Average Day Demands to calculate the potential customer's average day demand. The potential customer's average day demand will be increased by 50% for use in distribution system analysis and sizing. The increased average day demand is then multiplied by a peak factor from Table 5 to determine maximum day and peak hour demand.

Table 5 – Potable Water Peaking Factors

Factor	District 1	District 2	District 3A	District 3BC
Maximum Day To Average Demand Factor	1.33	1.37	1.45	1.48
Peak Hour To Average Demand Factor	1.73	2.27	1.58	1.86

Source: Max Day - Analysis of plant flow from 1997 thru 2003  
Peak Hour - Master Plan Table 4-27

The distribution system must be able to provide fire protection as well as water for consumptive uses. Table 6 is WWS' fire protection goals in gallons per minute (gpm).

Table 6 - Fire Protection Goals

Type of Structure	Goal (gpm)
Single Family Residential	1000
Multi-Family Residential	2000
Mobile Home	2000
Small Commercial	2500
Medium Commercial	3000
School	3500
Large Commercial	3500

WWS recognizes that these goals are general in nature and will use a specific fire protection requirement determined by the Fire Marshall, if available. However, in any case, WWS will not be responsible for providing fire protection in excess of 3500 gpm. In setting a top end goal of 3500 gpm, WWS recognizes that individual developments may elect to provide more than 3500 gpm through privately owned and maintained on-site facilities.

Any analysis of available capacity must include prior commitments to serve as well as existing customer flow. There is no "permitted capacity" for a distribution system. Determining if the distribution system can provide the appropriate level of service is accomplished by analyzing the distribution system in each of two loading conditions:

Loading Condition 1. The distribution system is loaded with peak hour demands of

existing customers, prior commitments and the potential customer. Under these loading conditions the residual pressure anywhere in the system cannot be less than 45 psi.

Loading Condition 2. The distribution system is loaded with maximum day demands of existing customers, prior commitments and the potential customer; and the potential customer's fire protection demand. Under these loading conditions the residual pressure anywhere in the system cannot be less than 25 psi.

When doing the above analysis, WWS will include representative potential customer on-site piping. In doing so, WWS will determine the minimum size for on-site piping.

Further, the distribution system will be analyzed in two configurations: existing system and year 2025 system.

If the distribution system (including the potential customer's on-site piping) meets the minimum residual pressure for each of the two loading conditions, in both the existing and the year 2025 configuration, then the system can provide the required level of service. If the system cannot provide the required level of service, improvements are necessary to allow the potential customer's project to proceed.

## **SANITARY SEWER**

Determining WWS' ability to serve a potential sanitary sewer customer starts with calculating average day demand for the potential customer.

### **Average Day Demand**

Table 7 will be used to calculate average day demand, in gallons per day (gpd).

Table 7 – Sanitary Sewer Average Day Demands

Type of Use	Unit	Demand (gpd/unit)
Bar, Cocktail Lounge	1000 SF of gross building area	309
Condominium, Apartment	Each	201
Day Child Care	1000 SF of gross building area	158
Fast Food Service	1000 SF of gross building area	864



Type of Use	Unit	Demand (gpd/unit)
Gas Station (fueling only)	fuel pump	138
Hotel (with restaurant and/ or meeting rooms)	rental room	217
Hotel (without restaurant and/ or meeting rooms)	rental room	64
Laundry and/ or Dry Cleaning (staff operated machines)	1000 SF of gross building area	693
Laundry and/ or Dry Cleaning (coin operated machines)	1000 SF of gross building area	2165
Merchandising	1000 SF of gross building area	138
Mobile Home	Lot	140
Movie Theater	Seat	3
Office	1000 SF of gross building area	159
Place of Worship	1000 SF of gross building area	130
Restaurant	1000 SF of gross building area	624
School	Student	11
Self Service Storage	1000 SF of gross building area	17
Single Family Residential	Each	250
Vehicular Repair	1000 SF of gross building area	118
Warehouse (mixed use)	1000 SF of gross building area	92
Warehouse (homogeneous, bulk storage)	1000 SF of gross building area	44

Table 3, adjusted for irrigation and infiltration/ inflow.

WWS reserves the right to develop similar values for other specific types of use not listed above.

## Wastewater Treatment Plant and Effluent Disposal

The sanitary sewer average day demand calculated above is used for the level of service condition for wastewater treatment plant and effluent disposal.

Any analysis of available capacity must include prior commitments to serve permitted but not yet constructed developments, as well as existing customer flow. Therefore, the sum of existing customer average day flow, prior commitments and potential customer average day demand is compared to the facility's permitted capacity.

Example:	Existing customer average day flow	= 4,000,000 gpd
	Prior commitments average day flow	= 1,000,000 gpd
	Potential customer average day flow	= <u>500,000 gpd</u>
	Total average day flow	= 5,500,000 gpd
	Facility permitted capacity	= 6,000,000 gpd

Existing customer average day flow plus prior commitments plus potential customer average day demand equals 5,500,000 gpd, which is less than the facility's permitted capacity of 6,000,000 gpd. Therefore, WWS can provide the appropriate wastewater treatment and effluent disposal level of service to this potential customer.

## Sanitary Sewer Collection System

Detailed analysis of the collection system may be done by WWS when WWS reviews detailed engineering issues with the developer as part of WWS' developer coordination process. Collection system issues are not considered in WWS' earlier reviews, since the nature of the collection system changes over time as improvements are made. A potential customer must make whatever collection system improvements are necessary to provide the required level of service in order to proceed with their project.

Before the collection system analysis can begin, the development plan must be detailed enough to be able to use Table 7 – Sanitary Sewer Average Day Demands to calculate the potential customer's average day demand. The potential customer's average day demand will be increased by 50% for use in collection system analysis and sizing.

Table 7 will be used to calculate existing customer average day demand where the gravity collection system is relatively new or well rehabilitated to remove excess infiltration/ inflow. For older, less rehabbed gravity collection systems, the values in Table 7 will be increased by 20% to determine existing customer average day demand, unless better information exists. Existing customer average day demand will be increased by 50% for use in collection system analysis and sizing.

The increased average day demand is then multiplied by a factor from Table 8 to determine peak demand.

Table 8 – Sanitary Sewer Peaking Factors

Number of ERU	Factor
1 to 250	4.2
251 to 600	4.0
601 to 1200	3.8
1201 and above	3.5

Any analysis of available capacity must include prior commitments to serve as well as existing customer flow. There is no “permitted capacity” for a collection system. Determining if the collection system can provide the appropriate level of service is accomplished by analyzing the collection system in a peak loading condition. That is, the collection system is loaded with the peak demand of existing customers, prior commitments and the potential customer. To accomplish this analysis, WWS will construct a steady state model that approximates the affected portion of the collection system. The model will be based on pipe roughness factors selected by WWS and peak demand flows. Under the peak demand loading condition:

1. All gravity sewers must be able to pass the wastewater without exceeding 90% of full pipe capacity;
2. All force mains must be able to pass the wastewater at a velocity less than 5 feet per second;
3. All pump stations must be able pump the wastewater with an average pump run time of less than 8 hours per day and without the use of the station’s standby pump; and
4. Existing pump station pump discharge flow can not be lowered by more than 10%.

Further, the collection system will be analyzed in two configurations: existing system and year 2025 system.

If the collection system meets the loading condition criteria in both the existing and the year 2025 configuration, then the system can provide the required level of service. If the system cannot provide the required level of service, improvements are necessary to allow the potential customer’s project to proceed. Improvements may include additional pumping capacity at existing pump stations, additional force main capacity, additional gravity sewer capacity or some combination. In determining the necessary improvements, WWS will not increase pumping capacity in an existing pump station by more that one standard horsepower size, for example, 5 HP can be increased to 7.5 HP; 10 HP can be increased to 15 HP. These horsepower changes can not result in a requirement to change the wetwell size and can not result in a requirement to change the pump station electrical service from 230 volt to 460 volt. If more than 50% of the pump stations in the model require horsepower changes, WWS will require piping improvements that reduce the need to change pump station horsepower to 50% or less of the pump stations in the model.



**APPENDIX C**  
City of Coconut Creek Water Quality Report





CITY OF COCONUT CREEK  
PUBLIC SERVICES DEPARTMENT  
RAJ VERMA, DIRECTOR  
4800 WEST COPANS ROAD  
COCONUT CREEK, FL 33063



### A message from our City Manager DAVID J. RIVERA

The livability and economic viability of Coconut Creek depends on the health and prosperity of Coconut Creek, and our vitality is dependent on the availability of clean, safe, water. The quality of water is of utmost importance in our lives and providing clean water to our residents is of top priority. You don't know how much you need clean water until you don't have it. Unfortunately, water shortages and restrictions are becoming permanent realities. But as individual citizens, we can do our part by conserving water and not polluting our local waterways. We are in this together and Coconut Creek will continue to be a leader in water conservation and create a path for a more sustainable future. You can get more information about your water system by contacting the Utilities & Engineering Division at 954-973-6786.



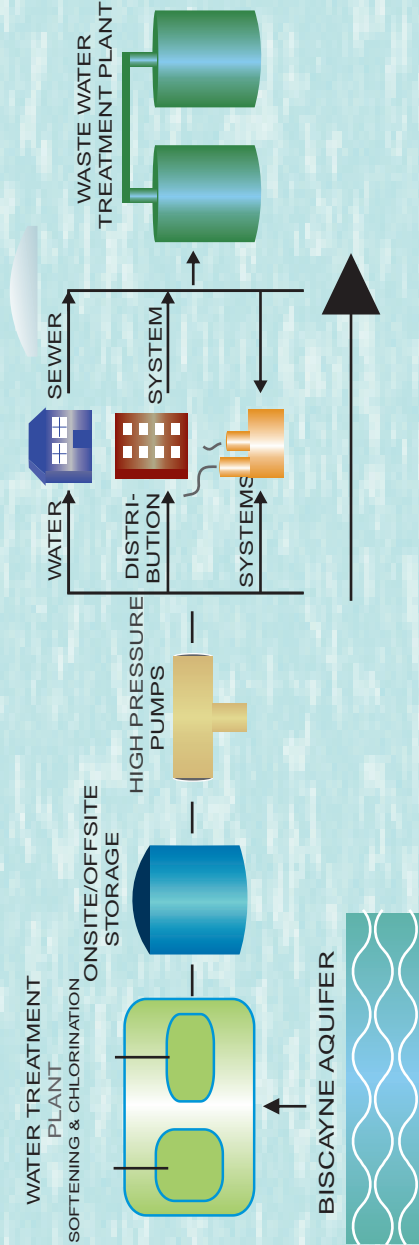
# 2009 Water Quality Report



## How does your water system work?

Drinking water can come from many sources such as aquifers, rivers, lakes, and springs, etc. In our area, it is obtained from the groundwater in the Biscayne Aquifer and then pumped up from wells to Broward County's District 2A Water Treatment Plant.

The raw water is treated with lime to reduce hardness. It then goes through a filtration process followed by treatment with chlorine and fluoride to destroy harmful bacteria and promote dental health, respectively.



## Reclaimed Water Project

As part of the Wiles Road Bridge project, Broward County has extended its reclaimed water lines into the City. The City is currently designing a system that will carry the reclaimed water to Sabal Pines Park and the Mainstreet development.

Reclaimed water receives significant treatment before being returned to the community. Reclaimed water reduces the use of potable water and ground water for irrigation, assists in recharging the Biscayne Aquifer, and minimizes the releases of wastewater into the ocean.

Currently, the median at the Wiles Road Bridge is irrigated with reclaimed water.



Lisa Aronson  
Mayor

Lou Sarbone  
Vice Mayor

Marilyn Gerber  
Commissioner

Becky Tooley  
Commissioner

Mikkie Belvedere  
Commissioner

David J. Rivera  
City Manager

Mary Blasi  
Deputy  
City Manager

Paul Stuart  
City Attorney

Raj Verma  
Public Services  
Director

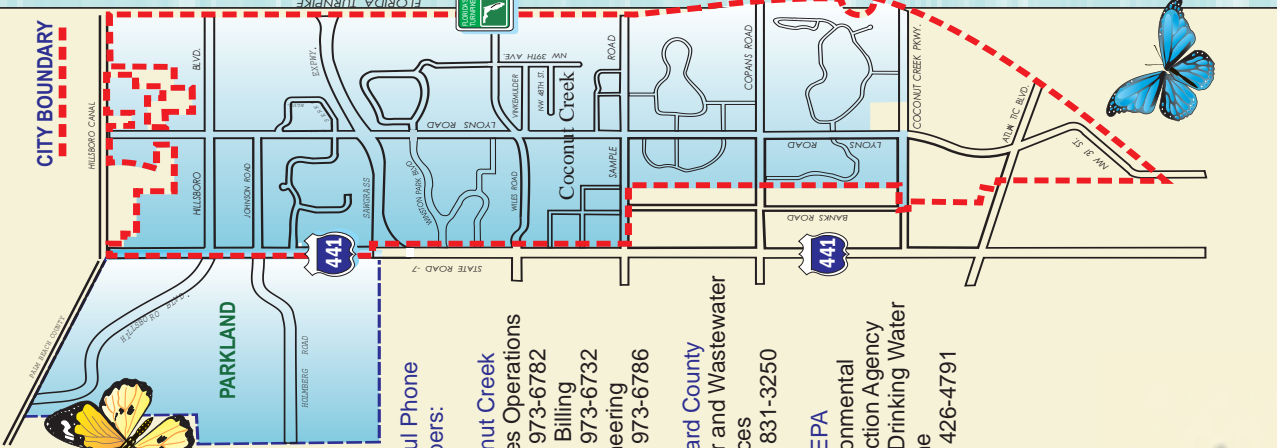








## SERVICE AREA



Helpful Phone Numbers:

**Coconut Creek**  
Utilities Operations (954) 973-6782  
Utility Billing (954) 973-6732  
Engineering (954) 973-6786

**Broward County**  
Water and Wastewater Services (954) 831-3250

**U.S. EPA**  
Environmental Protection Agency  
Safe Drinking Water Hotline (800) 426-4791



## Source Water Assessment

In 2009, the Department of Environmental Protection performed a Source Water Assessment for Broward County. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp) or they can be obtained from Broward County at (954) 831-3250.

## SOURCES OF CONTAMINATION

As rain water travels over the land surface or through the ground, it dissolves naturally-occurring minerals and can pick up substances resulting from animal or human activity. Therefore, contaminants may be present in any source water including:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

**Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and herbicides**, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses;

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and

**Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that our tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Likewise, FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for health as the public water systems.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Coconut Creek is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## DEFINITIONS

**AL** - Action Level, is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**MCLG** - Maximum Contaminant Level Goal, is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MCL** - Maximum Contaminant Level, is the highest level of a contaminant that is allowed in the drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MRDL** - Maximum Residual Disinfectant Level, is the highest level of a disinfectant allowed in drinking water.

**MRDLG** - Maximum Residual Disinfectant Level Goal, is the level of a drinking water disinfectant below which there is no known or expected risk to health.

**Ppb** - Parts per billion  
**Mg/L** - Milligrams per liter

**N/A** - Not Applicable

**ND** - Not Detected

## WHAT DOES THIS TABLE MEAN?

This table clearly demonstrates that our water does not violate any Maximum/Containment Level (MCL).

In addition to the chemicals and compounds listed in this table, NONE of the following compounds were detected in water quality tests in 2009.

COMBINED RADIUM  
CADMIUM  
CYANIDE  
MERCURY  
NITRITE  
SELENIUM  
CHROMIUM  
PESTICIDES  
NITRATE



More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency (EPA) Safe Drinking Water Hotline at (800) 426-4791.



## FREE IRRIGATION ANALYSIS

Coconut Creek and Broward County can reduce your irrigation costs. Through Broward's NatureScape Program, County staff can visit your facility to identify issues with your system that prevent it from operating at peak performance. This program can assist in reduced energy costs by minimizing pump time and cut the water bill for customers with irrigation meters. Contact the Utilities Division (954-956-1489).

## YOUR WATER IS SAFE TO DRINK

Last year, as in the years past, your tap water met or exceeded all standards of the Safe Drinking Water Act as established by the U.S. Environmental Protection Agency (EPA). This brochure is a snapshot of the City's water quality in 2009. Included are details about where your water comes from, what it contains, and how it compares to EPA standards.

The City of Coconut Creek purchases treated water from Broward County's District 2A Water Treatment Plant in Pompano Beach. This Plant, like all other water plants in the County, must adhere to a number of strict regulations. The water is tested frequently by Broward County and the City of Coconut Creek. City utility workers regularly collect water samples from 60 locations within the service area, which includes parts of Parkland. Independent labs test the samples to ensure the integrity of our system.

## January 1, 2009 - December 31, 2009

Contaminant	Dates of Sampling	Violation	Analytical Results	Range	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	2009	No	0.006	N/A	2	2	Discharge of drilling water; discharge from metal, refineries; erosion of natural deposits
Fluoride (ppm)	2009	No	0.86	N/A	4	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Sodium (ppm)	2009	No	30.8	N/A	N/A	160	Leaching from soil

Contaminant	Dates of Sampling	MCL or MRDL Violation	Level Detected	Range of Results	MCLG or MARDLG	MCL	Likely Source of Contamination
Total Trihalomethanes THM (ppb)	2009	No	51.57	30.3-172.3	N/A	80	By-product of drinking water disinfection
Chloramines (ppm)	2009	No	2.07	.67-3.37	MRDLG-4.0		Water additive used to control microbes
Halooacetic Acids (ppb)	2009	No	30.54	18.8-45.6	N/A	60	By-product of drinking water disinfection

Contaminant	Dates of Sampling	Violation	90th Percentile Result	Number Exceeding AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead* (ppm) (at the tap)	September 2007	No	0.006	1	0	AL= .015	Corrosion of household plumbing systems; erosion of natural deposits
Copper* (ppb)	September 2007	No	0.043	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits

Contaminant	Sampling Dates	MCL Violation	Highest Monthly Percentage/Number (0-62)	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	2009	No		0	Presence of Coliform Bacteria in 5% of monthly samples	Naturally present in the environment

\* 0 out of 30 samples tested in 2009 exceeded AL for copper at the tap.  
\* 1 out of 30 samples tested in 2009 exceeded AL for lead at the tap.







**HYDROSCIENCE ENGINEERS, INC., (HSe)** is a civil engineering firm that plans, designs, and manages the construction of water, wastewater, and recycled water projects.

**BERKELEY**

741 Allston Way  
Berkeley, CA 94710  
Tel: 510.540.7100  
Fax: 510.540.7106

**SACRAMENTO**

10569 Old Placerville Road  
Sacramento, CA 95827  
Tel: 916.364.1490  
Fax: 916.364.1491

**SAN JOSE**

4055 Evergreen Village Square, Suite 250  
San Jose, CA 95135  
Tel: 408.363.3884

[WWW.HYDROSCIENCE.COM](http://WWW.HYDROSCIENCE.COM)